

Sequence Protocol**(1) GENERAL INFORMATION:****(i) APPLICANT:**

- (A) NAME: metaGen - Gesellschaft für Genomforschung mbH
- (B) STREET: Ihnestrasse 63
- (C) CITY: Berlin
- (E) COUNTRY: Germany
- (F) POSTAL CODE (ZIP): D-14195
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(ii) TITLE OF INVENTION: Human Nucleic Acid Sequences from Pancreas Tumor Tissue

(iii) Number of sequences: 633

(iv) COMPUTER-READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: Patentin release #1.0, version #1.25 (EPO)

(2) INFORMATION ON SEQ ID NO. 1:**(i) SEQUENCE CHARACTERISTIC:**

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

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cttcacgat agctaccgct gcttccaacc aaagcaggag ggggccttca cctgctggtc 60
agcagtcact ggcgccccgc atctcaacta tggctcccgg cttgactata ccctggggga 120
caggaccctg gtcatagaca cctttcaggc ctctttcctg ctgcctgagg tgatgggctc 180
tgaccactgc cctgtgggtg cagtcttgag tgtgtcctct gtgcctgcaa aacagtgcc 240
acctctgtgc acccgcttcc tccctgagtt tgcaggcacc cagctcaaga tccttcgctt 300
cctagttcct ctgaacaaa gtccctgtgtt ggagcagtcg acgctgcagc acaacaatca 360
aaccgggta cagacatgcc aaaacaaagc ccaagtgcgc tcaaccaggc ctacgcccag 420
tcaggttggc tctagcagag gccagaaaaa cctgaagagc tactttcagc cctcccctag 480
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gaccccgaa actccagaag agaaggcagt ggccaaagtg gtgaaggggc aggccaagac 600
ttcagaagcc aaagatgaga aggagttacg gacctattc tggaagtctg tgctggcggg 660
gcccttgcc acacccctct gtggggggcca caggagacca tgtgtgatgc gtactgtgaa 720
gaagccagga cccaacttg ggcgcgctt ctacatgtgt gccaggcccc ggggtcctcc 780
cactgacccc tctcccggt gcaattcttc ctctggagca ggcccagctg aaccaatgga 840
ggcctgggga catctggcat ggtaacccct gcacatgatc tgaggccagc tccccctccc 900
tgagctgcct cctgcttctc cctcaaagtc tctaccctt ctcttctctt tttaagccct 960
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tgtgacccag ccccttacac cactttccac cttcctgtcc gaagtacacg gacactagct1080
gccccaggaa gttgtgtgat tttaaatac ttctgtcttt gctggaaagt gtatttgtgc1140
ataaataaag tctgtgtatt tgtttcaaaa aaaaaaaaaa aaaaaaagga ggtttgaagg1200
gg
1202

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(2) INFORMATION ON SEQ ID NO. 2:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1072 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

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cctccatcag ctcgccgcgc agcggctgta tttgcggcct gtgcgagtag gcgcttgggc 60
actcagtcct cctggcgagc gacgggcaga aatctcgaac cagtggagcg cactcgtaac 120
ctggatccca gaaggtcgcg aaggcagtag cgtttcctca gcggcgact gctgcagtaa 180
gaatgtcttt tccacctcat ttgaatcgcc ctcccatggg aatcccagca ctcccaccag 240
ggatcccacc cccgcagttt ccaggatttc ctccacctgt acctccaggg accccaatga 300
ttcctgtacc aatgagcatt atggctcctg ctccaactgt cttagtaccc actgtgtcta 360
tggttggaag gcatttgggc gcaagaaagg atcatccagg cttaaaggct aaagaaaatg 420
atgaaaattg tggtcctact accactgttt ttgttggaag catttccgag aaagcttcag 480
acatgcttat aagacaactc ttagctaaat gtggtttggt tttgagctgg aagagagtac 540
aagggtgcttc cggaaagctt caagccttcg gattctgtga gtacaaggag ccagaatcta 600
ccctccgtgc actcagatta ttacatgacc tgcaaattgg agagaaaaag ctactcgtta 660
aagttgatgc aaagacaaag gcacagctgg atgaatggaa agcaaagaag aaagcttcta 720
atgggaatgc aaggccagaa actgtcacta atgacgatga agaagccttg gatgaagaaa 780
caaagaggag agatcagatg attaaagggg ctattgaagt ttttaattcgt gaatactcca 840
gtgagctaaa tgccccctca caggaatctg attctcacc ccaggaagaa gaagaaggaa 900
aagaaggagg acattttccg cagatttcca gtggccccac tgatccctta tccactcatc 960
actaaggagg atataaatgc tatagaaatg gaagaagaca aaagagacct gatatctcga 1020
gagatcagca aattcagaga cacacataag aaactggaag aagagaaagg ca 1072

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(2) INFORMATION ON SEQ ID NO. 3:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1468 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

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gcacgaggtta ttatgctgtc gtagggctcc actgcagaaa gcaaaagtaa taagactaat 60
aaaaatatca cctgagaaac ctataacatt ggctgttggt gatggtgcta atgacgtaag 120
catgatacag gagggccatg ttggcatagg aatcatgggt aaagaaggaa gacaggctgc 180
aagaaacagt gactatgcaa tagccagatt taagttcctc tccaaattgc tttttgttca 240
tggtcatttt tattatatta gaatagctac cctgtacag tatttttttt ataagaatgt 300
gtgctttatc acaccccagt ttttatatca gttctactgt ttgttttctc agcaaacatt 360
gtagacagc gtgtacctga ctttatataa tatttgtttt acttccctac ctattctgat 420
atatagtctt ttggaacagc atgtagaccc tcatgtgtta caaaataagc ccacccttta 480
tcgagacatt agtaaaaaacc gcctcttaag tattaaaaca tttctttatt ggaccatcct 540
gggcttcagt catgccttta ttttcttttt tggatcctat ttactaatag ggaaagatac 600
atctctgctt ggaaatggcc agatgtttgg aaactggaca tttggcactt tggctctcac 660
agtcatggtt attacagtca caataaagat ggctctggaa actcattttt ggacttggat 720
caaccatctc gttacctggg gatctattat attttatttt gtattttcct tgttttatgg 780
agggattctc tggccatttt tgggctccca gaatatgtat tttgtgttta ttcagctcct 840
gtcaagtggg tctgcttggt ttgccataat cctcatggtt gttacatgtc tatttcttga 900
tatcataaag aaggtctttg accgacacct ccaccctaca agtactgaaa aggcacagat 960
gtactccaac acagttgctt taagtgcgca gttcatcgca ctgcagccat tgtcgagggc1020
aaggaatcag ctgagcaaac ttagcttact gaaacaaatg caggatcaa gtgcttggac1080
tccatgtgct gtttcccgga aggagaagca gcgtgtgcat ctgttggaag aatgctgga1140
cgagttatag gaagatgtag tccaaccac atcagcaggt gtgaaatctc tctaagtagc1200
ctttgctgca gatgagtatc ctatctggaa caggatgaac ctgccgctct agataccta1260
taaatacagca gctggtttta ccaactgaag caggaagtct gctattttatt agcactcttt1320
ggtggtagat ttcactttgt ggctttgggg taagggtctt ttcactcaca aaggaagaga1380
aagcaccttt gaagagactt catctaata acaaaaaatt ttgtttcata atctttcta1440
aatgggctca gtaggagtgg gtgtatgg 1468

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(2) INFORMATION ON SEQ ID NO. 4:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2331 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

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cggtctcgaga aaggacacct cctttttcag atgcctggca tgaggcttcc agaaacccag 60
gttcttccag gagaaataga tgagactcct ctttccaagc caggacatga ccttgccagc 120
atggaggata aaacagagaa atggtcttcc cagcctgaag gtccacttaa attgaaagct 180
tcaagtactg atatgccatc ccagatttct gtgggttaatg tggatcaact gtgggaagat 240
tctgtcctaa ctgtcaaatt ccccaaatta atggtaccaa gggttctcctt cctgcccccc 300
agctcagagg atgatgtgtt catccccact gtgagggaag tgcagtgtcc agaggccaat 360
attgatacag ccctttgtaa ggaaagtccg gggctctggg gagccagcat cctgaaggca 420
gggtgtgggg tccctgggga gcagcctgtg gaccttaacc tgccttttga agctccccca 480
atttcaaagg tcagagtga tttcaggggt gctcaggttg aaagtcaaga ggtcactata 540
cacagcatag tgacaccaga gttgttagat ctctcagtag ccaggacttt ttccactcag 600
attgtgcggg aatcagagat cccacagtc gagattcaaa cacttctgta cggatttttc 660
ttattaaaag tgaaaatccc agagccccac acgcaggcta gagtgtacac aacaatgact 720
caacactcta ggactcagga gggcacagaa gaggtccca tacaagccac ccaggagta 780
gactccattt ctggagatct ccagcctgac actggagaac catttgagat gatctcttcc 840
agcgtcaatg tactgggaca gcaaacactc acatttgaag ttcttcttgg ccaccagctt 900
gcagacagct gttcagatga ggagccagca gaaattcttg agtttcccc tgatgatagc 960
caagaggcaa ccacaccact ggcagatgaa ggcagggtc caaaagacaa accagaaagt 1020
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gagacagggt ttgattccaa aatgcactaa aacaggaga aggcaggctg gttccgattt 1140
gaggcacgac cagaggcaga actgcctaaa aagaaaagca aaagcaccga agatggggca 1200
cccaaattag gggttctcct atctcctacc aagaagaaga acaatcacgt tttttgatgc ccgagaaagt 1320
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tgagacaccc catccacag cacattacat ccacctcact tcacagaacg gagaacagag 1620
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taatgtctgt ggtgtacaag tctgttttgg tataacttct ttctgtctgc tgctgcttcc 1920
cggcaaacat agttttccta tttcaggcag agtgcggtat attccaggaa acactgtttc 1980
ctaactactt agcttacttc tttgttgaat gcctcactaa tggcaagttt caagatgttt 2040
tgggtgacaa tgcacacatg ctgggcaaaa ggggtgatggc cagtggctgg cagctgggcc 2100
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agcatccgcc agtgcttgc cagtgtgcac ggtcccacac tgtggccctt gactccccta 2220
atgtacacgc tgcagccaga atgcagatgg agctggcttg gctgttccct ggatgggcaa 2280
taaagaaagt gctgcatccc aaaaaaaaaa aaaaagtaaa aaaaaaagg g 2331

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(2) INFORMATION ON SEQ ID NO. 5:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1925 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

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aataaaaaaaaa attgtatttta cttagaagca ttcagaatgt caacaaaaca gccgcaattt 60
tttttttgca attacagagt ggtattcagt taacagaaca acaattatct tcgtataagc 120
tgcacagag acaactgaag atgaaaaaaaa taaaacccaa aaagaaaacc aaaagaaaaa 180
aaaaaaaaaa acaaaaaaca aaactaccat ccccatatat aactaatttg tgctgtgcac 240
caacaagaac ctgcttttaa tttccatgcc aatttacaac ccccatactg taccaggcaa 300
ggtagtggtc tattgaaaat accaccagga cagggctatc taaagacaca ttcggtagtg 360
tgtaactat acaaaaaaag acactgtaca gttaaaaaac aaatcttaca cagccttaca 420
tttcaatttt tttcttttaa aggagtgagt tgtgtacagg ggggttaaag gctttataga 480
caagaaaaaa aaaactgcgc tagaaccaac ttattcatca tcatcatctt cttcttcac 540
ttcatcttct tcatcttctt cctcctcttc atcctcttca tcttctcat cttcctctc 600
ttccttcttt tcttgcttt tttcagcctt gacaactccc ttttttgctg catcaggctt 660
tccttttagc cgatatgcag caatatcctt ttcgtatttt tccttcactt cgcagccttc 720
ttttcataag gctgcttgct atctgcagca gtgttatcc acatctctcc cagtttcttc 780
gcaacatcac caatggacag gccaggatgt tctcctttga tttttgggcg atactcagag 840
cagaagagga agaaggccga aggaggcctc ttgggtgcat tgggatcctt gaacttcttt 900
tttgtctccc ctttgggagg gatatagggt ttcattttct tttcataacg ggccttgctc 960
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gagcacttct tagaaaactc tgagaagttg actgaagcat ctgggtgctt cttcttatgc 1080
tcctcccgac aagtttgac aaaaaatgca tatgatgaca ttttgctct cggcttctta 1140
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gcaataaaat tatgacatat aagaccttaa agtacttagt aagggaatga aaaccaaagt 1260
actggttatt taacacagta gcgacatcaa cctccgtaaa atcagacaag aatatggccg 1320
agagattaaa ttccttgaag gggctatgcc aagcaaaaca aacaaaaca aaacagtcct 1380
tcagggcgat ctcaaaaagt ctagacacaa agatataccc atacagtatt ccctatctat 1440
ccgcccagat ctgctctgaa tgagtatcta actggctact taaacgattt taaaatctag 1500
aacaccattt taaaccaacc aaaccaaagg tcagaaaaca tgctgccaat tcgtggcttt 1560
gcactagata gggaataaac aagggcctaa gcgagtcgac tcttccta atatgggac 1620
taaaaaaaaa aatcaccgtg caccgaaagt ttcaaaaaac accctctttg cataaaactt 1680
tgctccaaaag agggagcagc agccagctcc ggtgctcgga acccggttg gaggtgcggt 1740
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ctaaacacgt ccggtctgaa gtttctccga gtaaacaaag atgagggaca aaagccactc 1860
ctgctcgtgg ctcggtggcc cctccccca actcgggaag tattttttgg agccgtcaaa 1920
gttgg

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(2) INFORMATION ON SEQ ID NO. 6:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1368 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

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gtcgggggagc gcgggggccgg ggcccagggg accccggggc acggagagcg ggaagaggat 60
ggattgcccc gccctcccc ccggatggaa gaaggaggaa gtgatccgaa aatctgggct 120
aagtgtctggc aagagcgatg tctactactt cagtccaagt ggtaagaagt tcagaagcaa 180
gcctcagttg gcaaggtacc tgggaaatac tgttgatctc agcagttttg acttcagaac 240
tggaagatg atgcctagta aattacagaa gaacaaacag agactgcgaa acgatcctct 300
caatcaaaat aagggtaaac cagacttgaa tacaacattg ccaattagac aaacagcatc 360
aattttcaaa caaccggtaa ccaaagtcac aaatcatcct agtaataaag tgaaatcaga 420
cccacaacga atgaatgaac agccacgtca gcttttctgg gagaagaggc tacaaggact 480
tagtgcatca gatgtaacag aacaaattat aaaaaccatg gaactacca aaggtcttca 540
aggagtgggt ccaggtagca atgatgagac ctttttatct gctgttgcca gtgctttgca 600
cacaagctct gcgccaatca cagggcaagt ctccgctgct gtggaaaaga accctgctgt 660
ttggcttaac acatctcaac ccctctgcaa agcttttatt gtcacagatg aagacatcag 720
gaaacaggaa gagcgagtac agcaagtacg caagaaattg gaagaagcac tgatggcaga 780
catcttgtcg cgagctgctg atacagaaga gatggatatt gaaatggaca gtggagatga 840
agcctaagaa tatgatcagg taactttcga ccgactttcc ccaagagaaa attcctagaa 900
attgaacaaa aatgtttcca ctggcttttg cctgtaagaa aaaaaatgta cccgagcaca 960
tagagctttt taatagcact aaccaatgcc tttttagatg tatttttgat gtatatatct 1020
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tcaagcagga ccctaagatg aagctgagct tttgatgcca ggtgcaatct actggaaatg 1140
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taaataaatt tcccagttaa agattattgt gacttcactg tatataaaca tatttttata 1260
ctttattgaa aggggacacc tgtacattct tccatcatca ctgtaaagac aaataaatga 1320
ttatattcac aaaaaaaaaa aaaacaccgg gggggggccc gggcccca 1368

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(2) INFORMATION ON SEQ ID NO. 7:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 424 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

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gaatgccctt tgggggcccag gggcccctgg gagccccgcc accctttccc acttggccgg 60
ggtgcccgcg gccgccaccc ctgcacgcat ggcaggctgg cccccccca gagecctccc120
cacagccagc agcctttcca cagtcaactgc ctttcccga gtccccagcc ttccctacgg180
cctcaccgcg accccctcag agcccagggc tgcaaccctt cattatccac cacgcacaga240
tggtacagct ggggctgaac aaccacatgt ggaaccagag aggggtcccag gcgcccagg300
acaagacgca ggaggcagaa tgaccgcttg tccttgccctg accagctggg gaacaaccct360
ggaccgaggc atcgggccagg acccatagag caccgcgttt ttccctgtgc ccttttgaa420
attg

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(2) INFORMATION ON SEQ ID NO. 8:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1020 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:
 (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

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caagtaaattg cagcactagt ggggtgggatt gaggttatgc cctgggtgcat aaatagagac 60
tcagctgtgc tggcacactc agcggctctg gaccgcatcc tagccgccga ctcacacaag 120
gcaggtgggt gaggaatcc agagtggcca tggagaaaat tccagtgtca gcattcttgc 180
tccttgtggc cctctcctac actctggcca gagataccac agtcaaacct ggagccaaaa 240
aggacacaaa ggactctcga cccaaactgc cccagaccct ctccagaggt tggggtgacc 300
aactcatctg gactcagaca tatgaagaag ctctatataa atccaagaca agcaacaaac 360
ccttgatgat tattcatcac ttggatgagt gcccaacacag tcaagcttta aagaaagtgt 420
ttgctgaaaa taaagaaatc cagaaattgg cagagcagtt tgtcctcctc aatctgggtt 480
atgaaacaac tgacaaacac ctttctcctg atggccagta tgtcccagg attatgtttg 540
ttgacccttc tctgacagtt agagccgata tcaactggaag atattcaaac cgtctctatg 600
cttacgaacc tgcagatata gctctgttgc ttgacaacat gaagaaagct ctcaagttgc 660
tgaagactga attgtaaaga aaaaaaatct ccaagccctt ctgtctgtca ggccttgaga 720
cttgaaacca gaagaagtgt gagaagactg gctagtgtgg aagcatagtg aacacactga 780
ttaggttatg gtttaattgtt acaacaacta ttttttaaga aaaacaagtt ttagaaattt 840
ggtttcaagt gtacatgtgt gaaaacaata ttgtatacta ccatagttag ccatgatttt 900
ctaaaaaaaa aaataaatgt tttgggggtg ttctgttttc tccaaaaaaaa aaaaaaaaaa 960
aaaaaaaaaa aaaaaaaaaa aaaaattgcc cccaagggga cgggttacaa ttggggggcg1020

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(2) INFORMATION ON SEQ ID NO. 9:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 718 base pairs
 (B) TYPE: Nucleic acid
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
 ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
 (A) ORGANISM: HUMAN
 (C) ORGAN:

(vii) OTHER ORIGIN:
 (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

```

tgaaaaagta aactacattt cctagcgtgc ccgtgtcttg cttccggctg acgtgtcttt 60
caggaagagg agctggtgag aagacagcga aatggcgctt ccggcccccg gcccggcctc120
cggcggtctc ggggaggtag acgagctgtt cgacgtaaag aacgccttct acatcggcag180
ctaccagcag tgcataaacg aggcgcacgg gtgaagctgt caagcccaga gagagacgtg240
gagagggacg tcttcctgta tagagcgtac ctggcgcgaga ggaagtctcg tgtggtcctg300
gatgagatca agccctcctc ggcccctgag ctccaggccg tgcgcatgtt tgctgactac360
ctcgcccacg agagtcggag ggacagcatc gtggccgagc tggaccgaga gatgagcagg420
agcgtggacg tgaccaacac caccttcctg ctcatggccg cctccatcta tctccacgac480
cagaaccggg atgccgccct gcgtgcgctg caccaggggg acagcctgga gtgcacagcc540
atgacagtgc agatcctgct gaagctggac cgcctggacc tcgcccggaa ggagctgaag600
agaatgcagg acctggacga ggatgccacc ctacccagc tcaaggtctt ggtaagcttg660
caacgggtgt aaaagctcaa ggatccttct gatttcaggg attggtaaaa ttgttcca 718

```

(2) INFORMATION ON SEQ ID NO. 10:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

```

gcaggaccgt cattgacgcc atgagcgcgc tgctgcggct gctgcgcacg ggtgccccag 60
ccgctgcgtg cctgcggttg gggaccagtg cagggaccgg gtcgcgccgt gctatggccc 120
tgtaccacac tgaggagcgc ggccagccct gctcgcagaa ttaccgcctc ttctttaaga 180
atgtaactgg tcactacatt tcccccttc atgatattcc tctgaagggtg aactctaaag 240
aggaaaatgg cattcctatg aagaaagcac gaaatgatga atatgagaat ctgtttaata 300
tgattgtaga aatacctcgg tggacaaatg ctaaaatgga gattgccacc aaggagccaa 360
tgaatcccat taaacaatat gtaaaggatg gaaagctacg ctatgtggcg aatatcttcc 420
cttacaaggg ttatatatgg aattatggta ccctccctca gacttgggaa gatccccatg 480
aaaaagataa gagcacgaac tgctttggag ataatgatcc tattgatgtt tgcgaaatag 540
gctcaaagat tctttcttgt ggagaagtta ttcatgtgaa gatccttgga attttggctc 600
ttattgatga aggtgaaaca gattggaaat taattgctat caatgcgaat gatcctgaag 660
cctcaaagtt tcatgatatt gatgatgtta agaagttcaa accgggttac ctggaagcta 720
ctcttaattg gtttagatta tataaggtac cagatggaaa accagaaaac cagtttgctt 780
ttaatggaga attcaaaaaa aaggcttttg ctcttgaaat tattaatatcc actcatcaat 840
gttggaagc attgcttatg aagaagtgtg atggaggagc tataaattgc acaaacgtgc 900
agatatctga tagccctttc cgttgacacg aagaggaagc aagatcatta gttgaatcgg 960
tatcatcttc accaaataaa gaaagtaatg aagaagagca agtgtggcac ttccttggca 1020
agtgattgaa acatctgaaa ttctgctgtc aagattccca tctctaagga ctccaagtgc 1080
tagagacaag ggggtctatg agcatttact gacttctgt taaaacttca ttttttcaa 1140
ctttttgagc tatgcaatat ataaataaac agtaagaatt ttaaattaaa aaaaaaaaaa 1200
aa

```

(2) INFORMATION ON SEQ ID NO. 11:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1610 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

```

ggagccggga ctgcgggcg gggggcgggg gcgtcgctgc ggggctggcc ggtgaggccg 60
cgcatgggg cgagtgcagc tttcgagat cagcctgagc cacggccgcg tcgtctacag 120
ccccggggag ccgttggtg ggaccgtgcg cgtgcgcctg ggggcaccgc tgccgttccg 180
agccatccgg gtgacctgca taggttcctg cggggtctcc aacaaggcta atgacacagc 240
gtgggtagtg gaggagggtt acttcaacag ttccctgtcg ctggcagaca aggggagcct 300
gcccgtgga gagcacagct tccccttcca gttcctgctt cctgccactg caccacgctc 360
ctttgagggt ctttcggga agatcgtgca ccaggtagg gccgccatcc acacgccacg 420
gttttccaag gatacaagt gcagcctcgt gttctatata ttgagccctt tgaacctgaa 480
cagcatccca gacattgagc aaccaaacgt ggcctctgcc accaagaagt tctcctacaa 540
gctggtgaag acgggcagcg tggtcctcac agccagcact gatctccgcg gctatgtggt 600
ggggcaggca ctgcagctgc atgccgacgt tgagaaccag tcaggcaagg acaccagccc 660
tgtggtggcc agtctgctgc agaaagtgtc ctataaggcc aagcgtgga tccacgacgt 720
acggaccatt gcggaggtgg aggggtgcggg cgtcaaggcc tggcggcggg cgcagtggca 780
cgagcagatc ctggtgectg ccttgcccca gtcggccctg ccgggctgca gcctcatcca 840
catcgactac tacttacagg tctctctgaa ggcgccggaa gctactgtga ccctcccgtt 900
cttcattggc aatattgctg tgaacctatg cccagtgagc ccccgccagg gcctggggct 960
gcctcctggg gccccacccc tgggtgtgccc ttccgcacca cccaggagg aggtgaggc1020
tgaggctcgc gctggcgccc cccacttctt ggaccccgtc tctctctcca ccaagagcca1080
ttcgagcgcg cagccctgc tggccacctt gagttctgtg cctggtgcgc cggagccctg1140
ccctcaggat ggcagccctg cctcacaccc gctgcaccct cccttgtgca tttcaacagg1200
tgccactgtc ccctactttg cagagggtc cggggggcca gtgcccacta ccagcacctt1260
gattcttcct ccagagtaca gttcttgggg ctacccttat gaggccccac cgtcttatga1320
gcagagctgc ggcggcgtgg aaccagcct gaccctgag agctgacccc gtgctgcctt1380
ctccaggcag gcctggcctc tgccctggga ctggggcgcc cagggcctcg tgccttctct1440
cttggcctag cctggccac tcaggacctg cccagcctct gccagctcct ctgcatccgc1500
cctcttctcc ctggggctgg ggtgggggtg gcaggagct gggacctgga gagacaactc1560
ctgtaaataa aacactttat ttgtagaaaa aaaaaaaaaa aaaaaaaaaa 1610

```

(2) INFORMATION ON SEQ ID NO. 12:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2155 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

cacgcaagga	tgaggcgggg	tttcgccgtg	gcgcgcgatgc	gtgcagcaaa	gaatggagga	60
gtcggaaacc	gaacggaagc	gggctcgcac	cgacgagggtg	cctgccggag	gaagccgctc	120
cgaggcgga	gatgaggacg	acgaggacta	cgtgccctat	gtgccgttac	ggcagcgccg	180
gcagctactg	ctccagaagc	tgctgcagcg	aagacgcaag	ggagctgcgg	aggaagagca	240
gcaggacagc	ggtagtgaac	cccggggaga	tgaggacgac	atcccgctag	gccctcagtc	300
caacgtcagc	ctcctggatc	agcaccagca	ccttaaagag	aaggctgaag	cgcgcaaaga	360
gtctgccaag	gagaagcagc	tgaaggaaga	agagaagatc	ctggagagtg	ttgccgaggg	420
ccgagcattg	atgtcagtga	aggagatggc	taagggcatt	acgtatgatg	accccatcaa	480
aaccagctgg	actccacccc	gttatgttct	gagcatgtct	gaagagcgac	atgagcgcg	540
gcggaagaaa	taccacatcc	tggtggaggg	agacgggtatc	ccaccaccca	tcaagagctt	600
caaggaaatg	aagtttcctg	cagccatcct	gagaggcctg	aagaagaaag	gcattcacca	660
cccaacacccc	attcagatcc	agggcatccc	caccattcta	tctggccgtg	acatgatagg	720
catcgctttc	acgggttcag	gcaagacact	gggtgttcacg	ttgcccgta	tcatgttctg	780
cctggaacaa	gagaagaggt	tacccttctc	aaagcgcgag	gggccctatg	gactcatcat	840
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gctgcaggag	gacagctcac	cactcctgcg	ctgcgccctc	tgcattgggg	gcatgtccgt	960
gaaagagcag	atggagacca	tccgacacgg	tgtacacatg	atgggtggcca	ccccggggcg	1020
cctcatggat	ttgctgcaga	agaagatggg	cagcctagac	atctgtcgct	acctggccct	1080
ggacgaggct	gaccgcatga	tgcacatggg	cttcgagggt	gacatccgta	ccatcttctc	1140
ctacttcaag	ggccagcgac	agaccctgct	cttcagtgcc	accatgccga	agaagattca	1200
gaactttgct	aagagtgcgc	ttgtaaagcc	tgtgaccatc	aatgtggggc	gcgctggggc	1260
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agacgtggac	gccatccacg	agtacctgct	gctcaagggg	gttgaggccg	tagccatcca	1440
tggggggcaa	gaccaggagg	aacggactaa	ggccatcgag	gcattccggg	agggcaagaa	1500
ggatgtccta	gtagccacag	acgttgcttc	caagggcctg	gacttccctg	ccatccagca	1560
cgtcatcaat	tatgacatgc	cagaggagat	tgagaactat	gtacaccgga	ttggccgcac	1620
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agtgtctgat	gacctcaaag	cgctgctgct	agaagccaag	cagaaggtgc	cgcccgtgct	1740
gcaggtgctg	cattgcgggg	atgagtccat	gctggacatt	ggaggagagc	gcggctgtgc	1800
cttctgcggg	ggcctgggtc	atcggatcac	tgactgcccc	aaactcgagg	ctatgcagac	1860
caagcaggtc	agcaacatcg	gtcgcaagga	ctacctggcc	cacagctcca	tggaacttct	1920
agccgacagt	cttcccttct	ctccaagagg	cctcagtccc	caagactgcc	accagtctac	1980
acatacagca	gccccctgga	cagaatcagc	atttcagctc	agctggcctg	gaatggggca	2040
ggctggtoct	ggctgcctgt	tccctgtgct	cttcagaatt	actgtttttg	tttcctttta	2100
ccccagctgc	cattaaagcc	caaacctcta	gccccaaaaa	aaaaaaaaaa	aaaaa	2155

(2) INFORMATION ON SEQ ID NO. 13:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1743 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

```

cctgggaggg cctgagctca ggttgaggtt tcaacttttag ctctgggacac ctccagctcc 60
tgctgagcgg acgggtccca gggagagcag acgagccaga cgcgcccacc tgggggagcc 120
gacggtcacg gagcatgggg tgggcctttg agcgggtagt ccgagagagt gtccaggagc 180
tggaacctgg tggggagttc atccctgtga ccagcctgca gagctccact ggcttccagc 240
cctactgcct ggtggttagg aagccctcaa gctcatggtt ctggaaaccc cggtataagt 300
gtgtcaacct gtctatcaag gacatcctgg agccggatgc cgcggaacca gacgtgcagc 360
gtggcaggag cttccacttc tacgatgcca tggatgggca gatacagggc agcgtggagc 420
tggaagcccc aggacaggca aagatcgagc gcggggccgc ggtgtctgac agctccagca 480
cctcaatgaa tgtgtactcg ctgagtgtgg accctaacac ctggcagact ctgctccatg 540
agaggcacct gcggcagcca gaacacaaag tcctgcagca gctgcgcagc gcggggacaa 600
cgtgtacgtg gtgactgagg tgctgcagac acagaaggag gtggaagtca cgcgacacca 660
caagcgggag ggctcgggac ggttttccct gcccgagacc acgtgcttgc agggtagagg 720
ccagggccat ctgagccaga agaagacggg caccatcccc tcaggcagca cctcgcatt 780
ccgggtggcc cagctggtta ttgactctga cttggacgtc cttctcttcc cggataagaa 840
gcagaggacc ttccagccac ccgcgacagg ccacaagcgt tccacgagcg aaggcgctg 900
gccacagctg cctctggcc tctccatgat gaggtgcctc cacaacttcc tgacagatgg 960
ggtccctgag gagggggcgt tcaactgaaga cttccagggc ctacgggcag aggtggagac 1020
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ggagggggtg ctgcgggacc agctggccct gcgagccttg gaggaggcgc tggagcaggg 1140
ccagagcctt gggccggtgg agcccctgga cgggtccagca ggtgctgtcc tggagtgcct 1200
ggtgttgtcc tccggaatgc tgggtgccga actcgctatc cctgttgtct acctgctggg 1260
ggcactgacc atgctgagtg aaacgcagca caagctgctg gcggaggcgc tggagtgcga 1320
gaccctgttg gggccgctcg agctggtggg cagcctcttg gagcagagtg ccccgtagga 1380
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tgctgggagc cgcaggccca gggccgcatg tgtgcactct acgcctccct ggcactgcta 1560
tcaggactga gccaggagcc ccactagcct gtgcccgggc atggcctggc agctctccag 1620
cagggcagag tgtttgcccc ccagctgcta gccctaggaa ggccaggagc ccagtagcca 1680
tgtggccagt ctaccatggg gccccaggag tggggaaaca caataaaggt ggcatacgaa 1740
gga

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(2) INFORMATION ON SEQ ID NO. 14:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 970 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

```

cggtctgagt gggtttttag tttgttcctt ctttttgaag tcccttcatt tcaatccttg 60
actctctctc cccttccctt gccagctct gttgaatgct gctgtgcgcg tgtgagggcc120
gctctgcaca cagggccctt gggttgtgtg aactgaaatt ctccctgtat ttgtgagact180
cgcaggagtc cccatctgta gcacaggcaa tgccagtgcc atgctgcagc ctcagaaacc240
aggcctctca ctccagcagc aggcagaacc gtgtctgtgg tcgggtgctg tccacagctc300
tgtctgcctt gttcttgggc ttgagctgga tagaggtggg gtctcttcac cttccctgaa360
ttcagaacag accctgtgcc tggccccagt gtgcccaggc aattccccag gccctcattg420
ggagcccttg gtgttctgag cagcagggcc caggcagcac atgagcagtg cccaggggct480
ccctgcgtga ggacggcaag gtgcgatgta tgtctaactt attgatggca ggcagcccc540
tgtgccccct aagcctggcc ctggttattg ctgagctctg tgctcagtgc tgcggcctgg600
ccgtggctcg tctgttcctt tggggggccc gggcgggttg tgggaatcag tcttcacaga660
cagacgtgag ccaggcggag gactcgttcc ttgcagaggt cagtcctcac ctgcaggtgt720
cgggggtggg gggggcaagg aggggcaggc acacaccatg tctgacctga acccgattct780
ggggagcatc ttcccgctcc ggccccacga cctccacagg gttacattgt aatatatatg840
ccccagctaa cctgtctgat ggtggcatct tcctgcagac atttcaaaac tgtaactttt900
atatgaaaaa aaataaacac agatgaaagc tgcccaatgc caaaaaaaaaa aaaaaaaaaa960
aaaaaaaaaa                                     970

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(2) INFORMATION ON SEQ ID NO. 15:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2003 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

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gagagatctg aaataacctt tcccagtgagg cagggttgcc aggggttgagg ggacagcaca 60
taccaccccc acccaacctg ttcgaggggc cctgcatggc acgggatgag tccctgccct 120
gtgcagctgc ctggcagtggt ctgggacaag gatcttgag ccagcacaga ggcctcttca 180
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acatcctggc ctttgaaagt ctgatatacct gagaggaggg cagggttttag ggccgcagtt 360
ccagccagcg tccccagcct ggcttccctg ccatggactc agtagctcgt ggggcttctt 420
accacccacc agccccgctg ggggtgcggc tggctgtggg caaaggagga cttgcctgga 480
gatttgagag aagattcctt ctaccagggc tgctgagggg ccaggcctgc atcaggggct 540
aggctctggc tgggcccga ggctgagact aaggctttcg accctggggt cctccatggg 600
atgctgcctc agacaaaggc agtgagcctt ccctgccaaa gtgcccattc catgggctcg 660
gcctcactgg tcactgttag cccatgaaca cgtgtggggc tcggtcacgt ggctttgagg 720
gcagctctgac caggctagac cacacgtgcc gtgacagggg gtgccattcc cctcgcaggc 780
tctaattgtc ccacatgtag cctggcagtc caaagaccaa gaatcaactt gcaaactctg 840
cattaaactg ctgtgcgact tcaggcatat cactgccttc tctgggcttc agtgtccttt 900
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ccaccctcag aagctgcttg ctctgcccc aggacaggag cttgacggat gaagtgcagc 1080
cagccaccca ggtgccattt ccagtctgac ttccagaaat gtgcaccatg tcctagagca 1140
cagacccatt ggctggagcc tccctgggagg gttcaaacca tcagctctat gagaaatgcc 1200
cagaaagggt ttgccgactc catcctgtg tggaggctgc ctgcctccgg ggtgggatgg 1260
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gccccgggct ccagagctca ggggtagggg ttctcctgag ggtgcagggg atccttctca 1680
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ctggacccct gccagggtctg tggacatggt tatatgcccg ggagaggggg gtgcagggcc 1860
ccagggatgg cccccaatcc cacctctgtt tattctgtaa actgcaacct ataaataacc 1920
tttagcatte ctattgtaac aaaattaatt tttatgaaat aaattatatt tcctagtcta 1980
ataaaaaaaaa aaaaaaaaaa aaa

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2003

(2) INFORMATION ON SEQ ID NO. 16:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2279 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

```

gattgaatta agcccttggg tttgccccac tgcagcttca agcggaaagg aaggaaccag 60
ttggaccagt ggtcacagac ccaagcaaaa ggcgaccgca atcagcagct gggctcacc 120
cctttcctct gaaccagtga cccaaacctt tcacctcga ttgggcaacc ttggcctggg 180
gcatgtttat caccactgaa gtgacttgca gctatcaaag accagttaga ggggtgtgcag 240
caagcacttt ctgagggtgc ccccatccca gaagaggaca cagacactga agaaggatgat 300
gactttgaac tacttgacca gtcagagctg gatcaaattg agagtgaatt gggacttaca 360
caagaccagg aagcagaagc acagcaaaat aagaagtctt caggtttcct ttcaaactctg 420
ctgggaggcc attaatctag gaatcagctt gcaacagagc acaaaaaaca ccaaaaaaat 480
ttcaaacaaa aaaaaaaaaa aaaaaaggaa aagaaaaaaa ttgaactgta agctttaatg 540
attacttttag atttgtttta tttccctcc tgcagtgaat taattggata tatatcagct 600
gacactgata gattgatatt tctgatcgtt atttttgtgt aataagcatg gaaatgaact 660
ttatacacac cactgtgttg tcagagataa atattagggg ttgtttttaa agcaaaaaga 720
aaaaaacaaa aaccaaaacta ttaaaatcct cctataaaat ttctttttct ttacagtttt 780
tcaagcatgc aaaacagttt attgtaactt actgaaaaat attaacaatt aattgtgaat 840
acatgtgtgt accagcttcc ttattcctaa tacctggaaa attttttttt caacggatag 900
attttgatgt aaaaaagacc gaaattatca aggtatctta gttgaaggac ttgggaaata 960
ctatcaaaat taatttctta ggaaaaaatt taaaagtata tttaagtact ctggatagac1020
tgaaacgttt ccatgttatt tctgcagttg tagacttagg cttatttgta aagaagcatg1080
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gttgtgtatc acatagacaa tggttatgat gtaaacagat tcagttgttt tgttgttcat1200
tcgtcatatg tttgtgatag ggatgttggg agcacagctc tattctgcct gctcagactt1260
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agttcttgat gagtgatgtg atcatcagca ataaagatat aataactctg ttttcttagc1380
ctgtatagag gagaggaact tgcttggcct taaaatatat ttatttgcca tttaagtata1440
aatatgaaat ctgtttctta ttgggaagat agaatatata tattttcctt taaacttttt1500
aaggtcactt ttaaataacc aaatttgatt tatggttttt aacaaaggac taaagagctg1560
aaaccaacct agttttgttt ttgtgatata aactttaagt gtcgagggac catgccagca1620
actacaaaa atctcttaaa tcttcaggta cagctggcat tttggcagat gcatagagac1680
atctgagacc ctcagaaagg aaggataatc caagaatata ggaaatctgt gttctcttcc1740
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gctactctta tttatttttt ctttctgagg tattaataaata tctggactga gttttgcca1860
atgttaaagg gagaagagtt actgaagact ttgaacactt gctttttgtg attgcttatg1920
tcattagtgc ctcatgactg tgtttgatgt cctttattga tacaagtgga gcctgtgcct1980
tcattatctt gccattttta atacaaatgg aaacctggtg tttgaaaatc tctgaactgt2040
gtgggttttg gaggaatata cctgaatttt attcaataac agtttctgga caggaagaaa2100
aatacagtta catatttata aaatagtcgt tatcagtatt tttttatgtg tatgtttctt2160
tctttaaaac aatattcttg gatataaagt agaaaagttt aaaggtcatt tccatttctt2220
cactaaggag aaaaaaagtt aaataatcca agtaattaaa gatataagtc actagatga 2279

```

(2) INFORMATION ON SEQ ID NO. 17:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 761 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

```

aaatcttagg gtaagccagc tgccttggaa gccaccagg gctccagact gcaggggaaga 60
agccgggagc aggcagccat acctccactc ttgtcctcaa ggactcagct gtgtggcctt120
ggatttcttt ttgcgggact tgcgccctgc aggacactgg tgttggagtt ggaggggcct180
atcctgcca ggggtgactc ccagggttgc agggggatag ggtggagaag ggtgctgtag240
cccttgagg cgtgaagtcc tttctgctct cttagcctat tacattagga gtagcttacc300
tttgggtgcc aacggtccag gatcccccta aaatgggatg gggataattc aggaatcagc360
ctgggttggc acagggggcg tattccttgg agaggcagga ctcacacaca cccatccaga420
tcagtgtagc ttctccctta ggaagcctct aggacatccc ccatgttaga gtccacatca480
gcaaagctgc tctgcccttg gctactttca cttgggctac ctgcttggg ctacttccac540
tagctgcaac cctgggacgc atgggagggg aggggtgtga ccctcaggaa cagtgtggtc600
cttggagggg ctagacagac cctgagcatc accaccccag ttattgtgac cccacgtttc660
caccatcag cctcctgggg tctctgcctg tgtgaacagt agggcccaac ctggaaccag720
atggtacggc catgccgggc ctgcaggagg ctcatgcctg g

```

(2) INFORMATION ON SEQ ID NO. 18:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1403 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

```

ggtggccttg cctgggtgct gggcctgcgt tctctggctg cttgetgect gtgtgcgttc 60
cttgggtggct ttggcttctg cactccttgg tcgtcaccgc tcaggctctc cattcacacg 120
aggtcctcct cgctctggcc gctccttgctg ctccgtgctg aagaaatcag actgatttcc 180
tcttaagact cctagggatg tggatgaagag ctgggactca agtgcagtc acggtgtgaa 240
acatgaggga ggtgaggtgt ccgtccactt ccccataaaa ggtgtgcatt tcagttaggc 300
tgccccgcca cagagcaggc ttcattctgct ctgccatcca gcccattctg gatgtgaggt 360
ggggtggaga catcatgggg tgattgcaga aagggggagt ggcggccccc gcagcttctg 420
ctgaggagct gaccgctctg agctgttctg ttctgtattg ctgctctgtg tctgcatgta 480
ttgtgaccgt gcggctccac ctcttccagc tgctgtctaca gctgaggcct ggatcccggc 540
ctttccctgt gacttacgtg tctgtcaccg gcaggcagcc ctacaaatcc tggtgacctg 600
ctctcccaag aacagagcct gtcccagat gtcccagtag cgatgagtaa cagaggtggc 660
tgtggacttc ctctacttct ccttgctgga tcagggcctt cctgcctccc gctgggcagg 720

tctggccttg ctctcttggc agggcccccag cccctctgac cactctgcag ctccacctgc 780
agctgatgcc aaagtgtgtg tgtccagtgt gcagcagccc tgggagccac tgccaccttc 840
agaggggttc cttgctgaga cccacattgc ttcacctggc cccaccatgg ctgcttgctt 900
ggcccaacct agcgttctgt gccatgctag agcttgagct gttgctcttc ttcaggggag 960
gaaatagggt ggagagcggg aagggtcttg ctcttaagtg ttgctgctgt ggcttttttg 1020
ccttctccaa agacgcactg ccaggcccca agcttcagac tgctgtgctt agtaagcaag 1080
tgagaagcct ggggttttga gccacacctac tctctggcag catcagcate ctactcctgg 1140
caacatcagg ccaacgtcca cccagcctc acattgccag atgttggcag aagggtctaat 1200
attgaccgtc ttgactggct ggagccttca aagccactgg gatgtcctcc aggcacctgg 1260
gtcccatgac cagctccccg tctccatagg ggtaggcatt tcaactggtt atgaagctcg 1320
agtttcatta aatatgttaa gaatcaaaac tgtctttgtt caggctgcta taacaaaaat 1380
ataatagcct ggggtggctta aac
1403

```

(2) INFORMATION ON SEQ ID NO. 19:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1702 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

```

gggccgcacc ggagtgtcgg tgggtgatggg catcccgagc gtgcggcgcg aggtgcactc 60
gtacctgact gacactctgc actcgtcat ctccgagctg agcccgagg agaaggagga 120
ctcgggtcatc gtggtgctga tcgccgagac tgactcacag tacacttcgg cagtgcacaga 180
gaacatcaag gccttggtcc ccacggagat ccattctggg ctccctggagg tcatctcacc 240
ctccccccac ttctaccctg acttctcccg cctccgagag tcctttgggg accccaagga 300
gagagtcagg tggaggacca aacagaacct cgattactgc ttccctcatga tgtacgcgca 360
gtccaaaggc atctactacg tgcagctgga ggatgacatc gtggccaagc ccaactacct 420
gagcaccatg aagaactttg cactgcagca gccttcagag gactggatga tcctggagtt 480
ctcccagctg ggcttcattg gtaagatgtt caagtcgctg gacctgagcc tgattgtaga 540
gttcattctc atgttctacc gggacaagcc catcgactgg ctccctggacc atattctgtg 600
ggtgaaagtc tgcaaccccg agaaggatgc gaagactgtg accggcagaa agccaacctg 660
cggtaccgct tcaaaccgtc cctcttccag cacgtgggca ctcaactctc gctggctggc 720
aagatccaga aactgaagga caaagacttt ggaaagcagg cgctgcggaa ggagcatgtg 780
aaccggccag cagaggtgag cagagcctg aagacatacc agcacttcac cctggagaaa 840
gcctacctgc gcgaggactt cttctgggcc ttcacccctg ccgcggggga cttcatccgc 900
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caccgggagg acaagctctt caacacgtct gtggaggtgc tgcccttcga caaccctcag 1020
tcagacaagg aggccttgcg ggaggggccg accgccacc tcgggtacct tcggagcccc 1080
gacggctacc tccagatcgg ctcttcttac aaggagtgag cagagggaga ggtggaccca 1140
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cgctggcccc gagggcctag gagctggtgc tgcccccgcc cgccggggcc cggaggagga 1440
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ggccgtttta gaagagcttt tacttgggcg cccgcccgtc ctggcgcgaa cactggaatg 1560
catatactac tttatgtgct gtgtttttta ttcttgata catttgattt ttccacgtaa 1620
gtccacatat acttctataa gagcgtgact tgtaataaag ggttaatgaa gaaaaaaaaa 1680
aaaaaaaaaa aaaaaaaaaa aa

```


(2) INFORMATION ON SEQ ID NO. 20:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 802 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

```

tttttttttt ttttttttca ttttcaaaag ggcttttatt aaattctccc cacacgatgg 60
ctcctgcaat ctgccacagc tctggggcgt gtcctgtagg gaaaggccct gttttccctg120
aggcggggct gggcttggtc atgggtccgc ggactggccg tgcttggcgc cctggcgtgt180
gtctagctgc ttcttgccgg gcacagagct gcggggctctg ggggcaccgg gagctaagag240
caggctctgg tgcaggggtg gaggcctgtc tcttaaccga caccctgagg tgctcctgag300
atgctgggtc caccctgagt ggcacgggga gcagctgtgg ccggtgctcc ttcctaggcc360
agtccctggg aaactaagct cgggcccttc tttgcaaaga ccgaggatgg ggtgggtgtg420
ggggactcat ggggaatggc ctgaggagct acgtgtgaag agggcgccgg tttgttggct480
gcagcgccct ggagcgccct tctcctgagc ctcagtttcc ctttccgtct aatgaagaac540
atgccgtctc ggtgtctcag ggctattagg acttgccctc aggaagtggc cttggacgag600
cgtcatgtta ttttcacaac tgcctgcga cgttggcctg ggcacgtcat ggaatggccc660
atgtccctct gctgcgtgga cgtcgcggtc gggagtgcgc agccagaggc ggggccagac720
gtgcgcctgg ggggtgagggg aggcgccccg ggagggcctc acaggaagtt gggctcccgc780
accaccaggc agggcgggct cc                                     802

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(2) INFORMATION ON SEQ ID NO. 21:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1647 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

```

accccttctc ttttcttttc cctttttctt tttctttttt gggtaagggtt gacaccccat 60
ttattggaga agaccccagc acccgcccc tgaggtctta agggctttgg tgtatccttg 120
gtcacgagcg ctgggccagg aagcagagtt cctgagagcc aagtctagtg gttgagagag 180
gacctgggct gggcctgggg agcaggaagc catctgtcca gctgggcagc ccccatgggt 240
ccctgggtgca gccccggcca tgtgtccagc gcccatact ccatgagggg ggtctgcacc 300
ccatcacacg ctggttctgc aggtctgcac ccctgtgagg ctgcccctgg ggggcatggg 360
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caaaaagaca cacgttgga ccaggagtgc caccagcagc caccggtcat ccctctggct 540
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cagccacagg gccaaacttg gactggggcc atcttcctt gggatttggg gggctttgga 660
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gggtggggagg gctgcgggct gggtggcagc aggcacagag atttgatggg caggagacac 780
aggggacctg gaggtgggtg tcagagaggg ctgggcagtt gggataatgg gaagctgggt 840
ggcctggggt ctgaggacaa gggcatctgg ggcttgaggg ggtcgctggg caccgagggt 900
ggtgaccaga ggggcatggt taggtgggat tccaggcaaa tgagtgggtg tctgggtgcc 960
agcgacccgg gtgtctggaa acatggggga ctggtgggca gggaagagct ccggatattt 1020
ggttgagatc atagggggct ggtgggcagg aggctgtgct gaatgagaga cagagagaat 1080
accgggttgg taggcagaag gcagatctgg atagtggct gcgatcacgg ggatctggtg 1140
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tgtgggatgc gtggcagaga ccaccacagg ccgggtgacg gagagcactg aggagtggta 1260
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ctccatccac aggatccag gcctctccgt ccagccaccg ttgaagcctt ccaggcctcg 1440
tcttcatctt cctcatctc cccgtcatcc agcaactcat ctccgaggtc ctgggaaccc 1500
tgggcaccca tggcccctgc agggctgcag ctgatgcca cagcctccag ctcatgtccc 1560
tcgctacaat aacactcgaa gccaccaacg tagttgacac acatctgctg gcacacaccg 1620
gcaatctggc actcatctgt gtccaca
1647

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(2) INFORMATION ON SEQ ID NO. 22:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1170 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

```

cctcgctggc agaagagata gaatcagggc tgccccaca gagtgggacc caaggggcta 60
attggaggca cgaggggacc cctccccagg gccttttctt cctctgcgtc ttccatctac 120
tgaaatggga gagggggtgg ggagcttctg ttctggtgaa gggacccggg caggccccc 180
gcaccccatg ctgacttgga gaaccccaga tctctggggc ccagccaggc aggggtgtgg 240
ggcagctgtg ccaatctacc tcacaggccc accccctgcc gggcatgccg tgggatcatg 300
ggcaggggaa gctctggggg tcggagacac cgctgcttag cccccccagc cagaacaccc 360
tgagggtctc ggggctctgg agagagtggg gcgggaggaa gaattggcac cttcctaggg 420
aaggagacga gcgcttcgcc ttgattctcc gagaagctc cgagaagtgc tttaagtgtg 480
tttgcattgc ccaggcggtg ggcagcgggg gcctgtccag ccctctcccg ccacccctcc 540
ccaagtgcag tccactgcct tgtcaccagc gacctgcctg tcatgcccac cccctgagga 600
agcatgggga ccctaacacc ctggtgccct gcaccagaca ggccgtggtc aggccaggc 660
caccggccgg gttctgccac agcttcccac gtgcttctgt acatgcgtgt gcctgtgtgt 720
ggtgtctgtt gctgtgtcgt gaaactgtga ccatcactca gtccaaacaa gtgagtggcc 780
ctcgaggcca cagttatgca actttcagtg tgtgtcataa cgacgtcact gctttttaaa 840
ctcgataact ctttatttta gtaaaatgcc caggagtcct ggaagctacg cggacttgca 900
gaggttttat tttttggcct tagaatctgc agaaattagg aggcaccgag cccagcgag 960
cagcctcgga cccggattgc gtttgcctta gcgatatgt ttatacagat gaatataaaa 1020
tgtttttttc tttgggcttt ttgcttcttt tttccccccc ttctcacctt cccttctccc 1080
cgacccacc ccccaaaaaa gctacttctt cattccgtgg tacgattatt ttttttaact 1140
aaaggaagat aaaattctat attcttaaaa 1170

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(2) INFORMATION ON SEQ ID NO. 23:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1259 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

```

ggagtatcca gataggcgac acgccggcgg gcggctgagg cgggaatggc tgctgtactg 60
cagcgcgtcg agcggctgtc caatcgagtc gtgcgtgtgt tgggctgtaa cccgggtccc 120
atgacctcc aaggcaccaa cacctacct gtggggaccg gcccaggag aatcctcatt 180
gacactggag aaccagcaat tccagaatac atcagctgtt taaagcaggc tctaactgaa 240
tttaacacag caatccagga aattgtagtg actcactggc accgagatca ttctggaggc 300
ataggagata tttgtaaaag catcaataat gacactacct attgcattaa aaaactccca 360
cggaatcctc agagagaaga aattatagga aatggagagc aacaatatgt ttatctgaaa 420
gatggagatg tgattaagac tgaggggagcc actctaagag ttctatatac ccctggccac 480
actgatgac acatggctct actcttagaa gaggaaaatg ctatcttttc tggagattgc 540
atcctagggg aaggaacaac ggtatttgaa gacctctatg attatatgaa ctctttaaaa 600
gagttattga aaatcaaagc tgatattata tatccaggac atggcccagt aattcataat 660
gctgaagcta aaattcaaca atacatttct cacagaaata ttcgagagca gcaaattctt 720
acattatttc gtgagaactt tgagaaatca ttacagtaa tggagcttgt aaaaattatt 780
tacaagaata ctcttgagaa tttacatgaa atggctaaac ataatctctt acttcatttg 840
aaaaaactag aaaaagaagg aaaaatattt agcaacacag atcctgacaa gaaatggaaa 900
gtcatcttt agtttcagat taaagaaagc tttgttttat tttgctttga gagaatggta 960
tgttttctta actatagggt attttataga gaataaaaa gtataaaaca ttaaaaataa1020
ccctagatat actttaaaat aatgttatat ttatgctaaa atatgtaaat tacactatac1080
aaccatatga taggttattt ctctaacctt gtcttctaac gttttaccaa aaattcataa1140
tctaatagtt tatcagtttt caatagatta aataaaatga ttactttaaa aataataaaa1200
tttatctaata ttaaagttga aaaaattttt ggccgtagt tatctattac tagtgatca 1259

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(2) INFORMATION ON SEQ ID NO. 24:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1021 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

```

gcgttcctcc tccggccctc ggtcaccgcc agcacgcgcc tgetteccgt ctgcgcgagt 60
ccacgcagct cccagggccc ttcaccagca cagcagcagc aggcattggca gcaagcgtgg 120
agcagcgcca gggcaccatc caggtgcagg gccaggccct cttcttccga gaggccctgc 180
ccggcagtg gaggctcgc ttctctgtac tgctgctgca tggatttcgc ttctcctccg 240
agacctggca gaacctgggt aactgcaca ggctggccca ggctggctac cgggctgtgg 300
ccattgacct gccaggctctg gggcactcca aggaagcagc agccctgccc cctattgggg 360
agctggcccc tggcagcttc ctggcggtctg tggatgatgc cttggagctg ggccccccgg 420
ttgtgatcag tccatcactg agtggcatgt actccctgcc cttectcacg gcccctggct 480
cccagctccc gggctttgtg ccagtggccc ccattctgcac tgacaaaatc aatgctgcca 540
actatgccag tgtgaagact ccagctctga ttgtatatgg agaccaggac cccatgggtc 600
agaccagctt tgagcacctg aagcagctgc ccaaccaccg ggtgctgac atgaaggggg 660
cggggcacc ctgttacctg gacaaaccag aggagtggca tacagggtctg ctggacttcc 720
tgcaggggct ccagtgaagc ccagcactgc tgcagggggt gggctgcctg cctgctctga 780
gctctctctt gcacgctctc tcttctctcc caggctctgg ctcatgcaca tgcaacaggt 840
gcgtctgtct atatgtctgg gttcttgtct tttgttgtct gtttgtcttt tctacctctt 900
tctcttgtag tgatagactg agggggtaaa atcaagagga aaaaactctc aggaatcaag 960
gaacataatc ctgtggaggg taaaccatta catgaggctt ctcccgggtc gttcaagttt 1020
c
1021

```

(2) INFORMATION ON SEQ ID NO. 25:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1407 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

```

agcaaagggtt gccggagacc aagatcggaa gcgtgaaata cgaaggcatc gagttcattt 60
aactgaaaac cggtcaagg agcaaggcca tcaggactca gcttttataa aaacaagagg 120
agtgcacttt tgttttgttt tgttcttttt ggaactgtgc ctgggttgga ggtctggaca 180
gggagccag tccccggccc catagtgttg cgggcactgg acccccgggc cccacggagg 240
ccgcggtctg aactgctttc catgctgcca tctggtggtg atttcggtca cttcaggcat 300
tgactcaagg cctgcctaac tggctgggtc gtttcttcca tccgacctcg tttcttttct 360
ttcctatggt cttttgttca gtgaatatcc ctagagctcc taccatatgt caggccctat 420
gcctcaccct gagaacgcag tggcctagag gtggacctgt ttgctgggaa ccccagggtca 480
cccccttttc ttccctactct gtgcctggag catcatgtcc acccctgcag atccttgga 540
aagaaaatgt ttatgttgca gggatttgca tggtcacgag tgagggcagg cccctgggga 600
cacatctgcc cacagctgca caggccaggg cgcaggcaca tctgttggtt ctcaggcctc 660
agataaaacc atctccgcat catatggcca gtgaccgctt tctcccttca agaaaattct 720
gtggctgtgc agtactttga agttttaatt attaacctgc ttttaattaaa gcagtttcct 780
ttcttataaa gtggaatcac caaatcttat cacacagagc acagtcctgt agttaccag 840
cccgtccag cagtgcggga gattgtaagg aagcgggtgc ggctggtgaa gcaagtctca 900
catgtcggcg ttcttgcca atggatacaa agataaagaa aatgttgctt ttttctagga 960
actgtcagaa atcctcatgc ctttcaagac ttctgtgaat gacttgaatt ttttattccc 1020
tgcttagggt ctgtgaacga ggctgtctc ttccctgggg tttctttcca tggcctttat 1080
ttctcctctt ccagtggag ttttgaggc tcttctctgt ggaaacttca cgagcggttg 1140
ctgggcctcg gcttcgctgg agtgtactcc aggggtgaagg cagagtggga tttgagacct 1200
aggttaggca cgaccaggc tgagaaggga cgtttccatc attcacagt ccctccccac 1260
agcactacct cagcccgagc cccaccctca ctctacccc acccccgcat cgtcaggggt 1320
gccacgggtg gccggagggt gcccgcgcgg ggcttggtcc tgttgccggg ccctgaaaaa 1380
gcttttcccc ttttgaaatt caagcac
1407

```

(2) INFORMATION ON SEQ ID NO. 26:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 286 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

```
ctctcggctc cgcttggcag cagctccgcc gccagaggc gtccgagacc ctccgactcg 60
tggttacgca taggcctcgc cagcgagcct tgcccaggca acgagtcgcc agcccgcccc120
ctcgccgcgg gctaggtctc acctcgccac cagtacgtct tggacaagta gtgccaggtc180
tgatgccggg tgtggtgagt gccgcccggg cccagggtgc cgcctcgat gaggtcccgg240
cgtcgctccg gtcgcagcac cacctccagc tccgcgaagg tcttgc 286
```

(2) INFORMATION ON SEQ ID NO. 27:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 815 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

```

cgctcggtt gcactgggtg ctggacagcc gacgcaacta caaatggggc ggagtttcgg 60
cactggagca gctaatttgc atataggaat gagctccac aaacacgaga agttccagca120
agttcgccac ttccggttct cctggctatc caatagcatc gagtggagca tccccggaag180
tgaggcagcg gaggacgacc tttttccggt tccggcctgg cgagagtttg tgcggcgaca240
tgaaactgct taccacaat ctgctgagct cgcagtgtgc gggggtgggg tcccggtggct300
tccccctgcg cctccaggcc accgaggtcc gtatctgccc tgtggaattc aacccaact360
tcgtggcgcg tatgatacct aaagtggagt ggtcggcggt cctggaggcg gccgataact420
tgcgctctgat ccagggtgcc aaagggccgg ttgaggata tgaggagaat gaggagtttc480
tgaggacct gcaccacctg ctgctggagg tggaaagtga agagggcacc ctgcagtgcc540
cggaatctgg acgtatgttc cccatcagcc gcgggatccc caacatgctg ctgagtgaag600
aggaaactga gagttgattg tgccaggcgc cagtttttct tgttatgact gtgtattttt660
gttgatctat accctgtttc cgaattctgc cgtgtgtatc cccaaccctt gacccaatga720
caccaaacac agtgtttttg agctcggtat tatatatatt tttctcatta aaggttttaa780
acaaaaaaa aaaaaaaaaa aaaaaaaagt cgacg

```

815

(2) INFORMATION ON SEQ ID NO. 28:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 548 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

```

tttctcgaac cttctctttt ctttctttt tgcactgtgc aaatatattg actttatttg 60
tctcctttca ggagcctcac agacatatcc aggtaaaaag atcgttaaat aaatgccttc120
agccatcgca atgcaaaaaa aaatatcaat cctccagacg cagtagcagc cgcgctgcgc180
ccaaagtccc aacggccacg cctaacaatt ataaaagtgt tcagcgagag tgttggcggt240
agtgtgaatg ggtgtgcgct ggggggcacg gtggagcggt gtgcaaaate ggagttgcaa300
accatcggac aagggcattg agtggtacc cgccgccgac tcagcgcggg cgcgctccc360
cgcacacact cacagcagag ttcgactgg gaagagttaa aaaataaaca ttacaagga420
cgaggaaagc ggccccgctc ccggcgctcc cgggccaggg cgagcgcggc gagggcgca480
ccgaccggtt cgcagcgggg cgggagtcgg aagcgcgcca ggagcgggcg gtcccgggtc540
cttgcggg

```

548

(2) INFORMATION ON SEQ ID NO. 29:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 493 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

```

gcaagatggc tgcctgaca gcggagattt tgcagcactc cagagcctgc tcaaggcctc 60
ctcgaaagat gttgtcagac agctgtgtca agaaagcttt tccagttcag cccttggtt120
gaaaaaactc ttggatgtta catgttccag cttgtctgtg acccaggagg aggcagagg180
actgctccag gctctgcacc gctcactag gctggtggca ttccgtgacc tgcctctgc240
cgaggcaatt ctggctctct ttccagaaaa ttccaccaa aacctcaaaa acctgctgac300
aaagatcatc ctagaacatg tgtctacttg gagaaccgaa gccaggcaa atcagatctc360
tctgccacgc ctggtcgatc tggactggag agtggatatc aaaacctcct cagacagcat420
cagccgcgatg gccgttgccc cacctggcct ggttccagat ggaaggttcc aaggaggttc480
ccaggctatg ggg                                     493

```

(2) INFORMATION ON SEQ ID NO. 30:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1063 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

```

cgctccccc tccaactctc aaccacttc tccagccagc gccccagccc tcccgcgcgc 60
cgctcgagg tcccaggag cgcagactgt gtccctgaca atgggaacag ccgacagtga 120
tgagatggcc ccggaggccc cacagcacac ccacatcgat gtgcacatcc accaggagtc 180
tgccctggcc aagctcctgc tcacctgctg ctctgcgctg cggccccggg ccaccagggc 240
caggggcagc agccggctgc tgggtggcctc gtgggtgatg cagatcgtgc tggggatctt 300
gagtgcagtc ctaggaggat tttctacat ccgcgactac accctcctcg tcacctcggg 360
agctgccatc tggacagggg ctgtggctgt gctggctgga gctgctgcct tcatttacga 420
gaaacggggg ggtacatact gggccctgct gaggactctg ctacgctggg cagctttctc 480
cacagccatc gctgccctca aactttggaa tgaagatttc cgatatggct actcttatta 540
caacagtgcc tggcgcatct ccagctcgag tgactggaac actccagccc ccaactcagag 600
tccagaagaa gtcagaaggc tacacctatg tacctccttc atggacatgc tgaaggcctt 660
gttcagaacc cttcaggcca tgccttggg tgtctggatt ctgctgcttc tggcatctct 720
ggccctctcg tggctgtact gctggagaat gttcccaacc aaagggaata gagaccagaa 780
ggaaatgttg gaagtgaagt gaatctagcc atgcctctcc tgattattag tgcttgggtc 840
ttctgcaccg ggcgtccctg catctgactg ctggaagaag aaccagactg aggaaaagag 900
gctcttcaac agccccagtt atcctggccc catgaccgtg gccacagccc tgctccagca 960
gcacttgccc attccttaca ccccttcccc atcctgctcc gcttcatgtc ccctcctgag 1020
tagtcatgtg ataataaact ctcatgttat tgttcccaaa aaa 1063

```

(2) INFORMATION ON SEQ ID NO. 31:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 472 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

```

cggctcgagg cggcgcgatg gcggcggggc tggcgcgggt cctgttgctc ctccgggctct 60
cggccggcgg gccgcgcgcg gcaggtgcag cgaagatgaa ggtggtggag gagcccaacg 120
cgtttggggg gaacaaccgg ttcttgccctc aggccagtcg cctccaggcc aagagggatc 180
cttcaccggg gtctggaccc gtgcattctc tccgactctc gggcaagtgc ttcagcctgg 240
tggagtccac gtacaagtat gagttctgcc cgttccacaa cgtgacccag cacgagcaga 300
ccttccgctg gaacgcctac agtgggatcc tcggcatctg gcacgagtgg gagatcgcca 360
acaacacctt cacgggcatg tggatgaggg acggtgacga ctgccgttcc cggagccggc 420
agagcaaggg ggagctggcg tgtgcgagcc cgagcaactg cgtctaaggg gt 472

```

(2) INFORMATION ON SEQ ID NO. 32:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2568 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

```

catctctctg cagtgccttc ctgcctgtg cagcccgcgc acccacaggc tcacccctcc 60
tgccgggtgc cagaagcccc ctccagcagg gcctctctcc gtggccccag cttcactctc 120
tccctcagca catgccctgc tggaggcccc agccctccgt ggacagcagg ggccacgtgg 180
agcccgggcc gctcaccgcg gaccagtgct tggccgcctt cttggtgcca aaccccttc 240
ccccacccag agactgggca gctgtgtctg gttegttctt tgcactaacc acatttgta 300
tctctagggc aggctggggc tgcgggtgga gggggaccgc tggcaccccc cttccctccc 360
ttcttggttc catttccatc catgacaggt acagcatccc aggagcccgg cctgaggggc 420
tggaccogag ccggctgtga acatccctca gcccctgtg tcccccttg ggactaacca 480
ctaacctcac ccccaaactc cacgggtgcc cctagctggc ccagagccgg cagtgtgagc 540
ccaagtccgg gctggagccg aggcggagc agctgtctgg gactcaaggc tgcagtagcg 600
tttcttcatg ggggtgctca ggggtgcca cagaccgaca ggcagcccaa gggcctggac 660
acccctcccc aggcagggtc tgccccagga ggactgtcct cgggaatgaa cctcccgcg 720
gctttggact gaggtccctg tggcctcggt ctctcccca tgaagtggga gcgaggctcc 780
ccaatggtgc ttttggttt agtgtacgat gttgtgtgtg cttcccgccg tggagggcag 840
agccacccca catcaggatc ggacgtgcta cccctcccg tcccggccct ggcccagcca 900
gcccagccct cgaggctcga tgctgtgcc aaggccaggg gcagccagag ggcagctgga 960
tggccacgtg caggggtcaa ggctggggcc tgcagtgggg cgggcccgca gcccagcag 1020
tttacagacg catggctctt cctccagag cagccggcag ctacctggac cggaaatgtc 1080
ctcatccctt ccctggggcc aggtctgtgc ctggccttcc tctgtgaacc cctcctttct 1140
ttgtgctggt gtctgggacc aaaaaggggg aatatgggag ggcagagtgg ggaggggagt 1200
ccatgggcct ggggccccaa gccggggcgt ctgagctccc caggcatgac caaacctcag 1260
tggagggggc tctgcttcag gcccgcctg gctgacattc tgagccccc tcggagggccc 1320
cgccacagcc aacctgccc gtctttctc tgggcttgac ccgccagga gttctccagg 1380
cctagggcca ggagagagg cctggcacc tggcgtgggt gcccgccaa gccctgcga 1440
ccgctcagaa gcacaaatgc tgtccatggc cgtcaggctg cctgccaggt gaatggacat 1500
agcgtgagag gcggtgagc cagggcttcc agcctcgtgc tgtctcgga ctctgaccg 1560
tgggtgtgct gtgtgcccgt ctgtgacttt ctactacca aggttgaaga aaggaaacgg 1620
ggaaaatcaa aaggggttca aacccacct cagtaggtgg aggggagcgc ctgccattgg 1680
ttgtattttt gttctgagtt ttccgtgccg tgttcctaac tactccatcc catgacctcg 1740
ccacacctac tggggcatct ggctgggtgcc tgctgccatg gccagccccc actctcacccl 1800
tgcacagggg gtcttgagc cccagggccc acagcctcgt tgggaggaca ggggtggccct 1860
ggggacaaga gggaggagcc caggggctta cctcactgag agtgctcccc agcaggcatc 1920
cactacccca gggcccccca catgtcatgg caaggttggg agtgaatggg cctggttggg 1980
agcagcccct ggcccattgc ccaccaccc atctcactat gcaattcgag ttccaagcaa 2040

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catttgcctcc tgccttgggg ccagctctgc ccagccctg agaggggtgg tgaggcagcc2100
ccctggaccc cagaaccca gacaagggg caggcgggg accagggcct ctctgtggg2160
atctttgttt tgtgtttaac cataatggt gtgtactgaa ccaattcata tttgttatat2220
ataatatata tatatataat ctcttaaga ctgagctcc tggtttacc cccggcctg2280
ggcatctgac ctccccacc ccagtgtgat ttaacatcca ggaactgagg cctgaaccat2340
tttgcatttc cccctctcc agcctctgta gggccatggc tgtatgtact gtcgctgtgt2400
tttttggttt ttttagaact gggtttggg gctgattttt atttctttgg gggctttttt2460
tcttggcaaa tactaaaaat ctgctcaatg taatttctgt ggtttctatt cagcttgggt2520
ttcatgtttt aaaataaatt ttaaaaagca aaaaaaaaa aaaaaaaa 2568

```

(2) INFORMATION ON SEQ ID NO. 33:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 239 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

```

cgcgatggcg gcggggctgg cgcggtctct gttgctctc gggctctcgg cggcggggcc 60
cgcgccggca ggtgcagcga agatgaaggt ggtggaggag cccaacgcgt ttgggtgagc120
agcctcgcg gctggcggt cgagcgggg acggcccgg ccggttccc gctgaccttg180
ccgcttccc taggtgaac aaccggttct tgcctcaggc cagtcgctc caggccaag 239

```

(2) INFORMATION ON SEQ ID NO. 34:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 482 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

```

ctccaagctt ggccctggcca acactcggta ggcagaatga tcacctccgt tgttttcaggt 60
actctgtgtt tatttatgca acagttcatg taaaatggag acgaggccag aagaatcctt120
gagcagacag agccagttgg gctcctaag tgaccttaac cttgcttgat ttgcaagcat180
gtctgaaact ttatttggg tatttcttgt aaatgcctat gttaaagaaa cacagaactt240
aagctcaacc aatcagaagc agccaacaaa aacgtaatta gtaactagga cttcctcatg300
ggatagacca aataaggcaa ctgtataact gtgtaactgt ataactgtaa ccaatgaaat360
attatctttg cttttatcta tttgtcctaa aaagcctcct cctcatgttc tctctgggga420
gctccctagc cacttctgga tcaactgtca aataaactct taaatatttt aaaaaaaaaa480
aa

```

482

(2) INFORMATION ON SEQ ID NO. 35:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 641 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

```

gagagcagta ggtgtagca gcttggtcgc gacaggggag ctaggtagag cgccgggacc 60
tgtgacaggg ctggtagcag cgcagaggaa aggcggcttt tagccaggta tttcagtgtc120
tgtagacaag atggaatcat ctccatttaa tagacggcaa tggacctcac tatcattgag180
ggtaacagcc aaagaacttt ctcttggtcaa caagaacaag tcatcgggcta ttgtggaaat240
attctccaag taccagaaaag cagctgaaga aacaaacatg gagaagaaga gaagtaaacac300
cgaaaatctc tcccagcact ttagaaaggg gaccctgact gtgttaaaga agaagtggga360
gaacccaggg ctgggagcag agtctcacac agactctcta cggaacagca gcactgagat420
taggcacaga gcagaccatc ctctgtctga agtgacaagc cacgctgctt ctggagccaa480
agctgaccaa gaagaacaaa tccacccag atctagactc aggtcacctc ctgaagccct540
cgttcagggt cgatatcccc acatcaagga cggtaggat cttaaagacc actcaacaga600
aagtaaaaaa atggaaaatt gtctaggaga atccaggcat g 641

```

(2) INFORMATION ON SEQ ID NO. 36:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 381 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

```

aagttgatga cctacgctct tactttctgt tgccaggagt aactgaaagc aaacaccaca 60
gtctgttggt tattagcttt taaaggcttg tcaacattcc ttgttaacaa tttctttttg120
ggtagccttt tataaaatgc gtaggtgatg agtgatccag cagacaaggc ggctcgagcc180
gattcggctc gagcggctcg aggtaaaaga aaaaaaatg tggaggaaaa catggcctac240
tcagctttga tggaagtggc tggttactgc ttaatagaga gaatgctttg gaatcctatg300
ttgaaaataa aaagtgtttg gttgtgcagt tatgcggtca tggtcattcc cagacagttg360
gctaagggtt agtggtcctc t 381

```

(2) INFORMATION ON SEQ ID NO. 37:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1539 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

ctggggacag	gaagcccctg	taccattatg	gtcggggcat	gaatcccgt	gacaaaccag	60
cctgggcccg	agaggtaaaa	gagagaacaa	ggatgaacaa	gcagcagaac	tctcccttgg	120
ccaagagcaa	gccaggcagc	acggggcctg	agccccccag	cccccaggcc	tccccagggc	180
ccccaggcct	cccctgggcc	cccaaaccct	accacaaatt	catggccttc	aagtcctttg	240
ccgacctccc	ccaccggcct	ctgctggctg	acctgacagt	agaggagggg	cagcgggtca	300
aggatcatcta	tggtccagct	gctggcttcc	atgctgtgga	tgctgactcg	gggaacagct	360
atgacatcta	catccctgtg	cacatccaga	gccagatcac	gccccatgcc	atcatcttcc	420
tccccaacac	cgacggcatg	gagatgtgc	tgtgtacga	ggacgagggt	gtctacgtca	480
acacgtacgg	gcgcatcatt	aaggatgtgg	tgctgcagtg	gggggagatg	cctacttctg	540
tggcctacat	ctgctccaac	cagataatgg	gctgggtga	gaaagccatt	gagatccgct	600
ctgtggagac	gggccacctc	gacggggtct	tcatgcacaa	acgagctcag	aggctcaagt	660
tctgtgtgta	gcggaatgac	aagggtgttt	ttgcctcagt	ccgctctggg	ggcagcagcc	720
aagtttactt	catgactctg	aaccgtaact	gcatacatgaa	ctggtgacgg	ggccctgggc	780
tggggctgtc	ccacactgga	cccagctctc	cccctgcagc	caggcttccc	gggcccggcc	840
tctttccctt	ccctgggctt	ttgcttttac	tggtttgatt	tactggagc	ctgctgggaa	900
cgtgacctct	gacccctgat	gctttcgtga	tcacgtgacc	atcctcttcc	ccaacatgtc	960
ctcttcccaa	aactgtgcct	gtcccagct	tctggggagg	gacacagctt	ccccttccca	1020
ggaattgagt	gggcttagcc	cctccccctt	tttctccatt	tgagaggaga	gtgcttgggg	1080
cttgaacccc	ttaccccaact	gctgctgact	gggcagggcc	ctggaccctt	ttatttgcac	1140
gtcaggggag	ccggctcccc	ccttgaatgt	accagaccct	gggggggggc	actgggccct	1200
agatttttgg	ggggtcacca	gccactccag	gggcagggac	catttcttca	ttttctgaaa	1260
gcactttaat	gattccctctg	ccccaaact	ccagggaatg	gaggggggag	cccgcagcc	1320
aaaacatgcc	ccccattccg	gacccccctc	tcctcttcta	gccccatgcc	ttccccgggt	1380
gagggaggga	gcagggagcc	ctcactctcc	acgccccttg	cttgcatccg	catatagtgt	1440
gagcagcaag	taacccttct	cctccttccc	cagtcacccc	tcctcaatgt	agtggccttg	1500
aattgtcttt	attaacaaac	aggatatcca	aggtcgagc			1539

(2) INFORMATION ON SEQ ID NO. 38:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2195 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

```

gctccgagga aggcctgtgg gagtctcgga gacgtgtctg tctgtgagge gctgggtgca 60
cgtccccagg gctctgggct aggaaggcag cggcgagggt cctccccacg taccctcgc 120
gggcccgagc gagcaacgtg gggcggaagg ggcggcgaag gcccgggctg ggagcggttg 180
cggccggagt cccagccatg gcggagtctg tggagcgcct gcagcagcgg gtccaggagc 240
tggagcggga acttgcccag gagaggagtc tgcagggtccc gaggagcggc gacggagggg 300
gcgggccgggt ccgcatcgag aagatgagct cagagggtgg ggattcgaat ccctacagcc 360
gcttgatggc attgaaacga atgggaattg taagcgacta tgagaaaatc cgtacctttg 420
ccgtagcaat agtaggtgtt ggtggagtag gtagtgtgac tgctgaaatg ctgacaagat 480
gtggcattgg taagttgcta ctctttgatt atgacaagggt ggaactagcc aatatgaata 540
gacttttctt ccaacctcat caagcaggat taagtaaagt tcaagcagca gaacatactc 600
tgaggaacat taatcctgat gttctttttg aagtacacaa ctataatata accacagtgg 660
aaaactttca acatttcatg gatagaataa gtaatggtgg gttagaagaa ggaaaacctg 720
ttgatctagt tcttagctgt gtggacaatt ttgaagctcg aatgacaata aatacagctt 780
gtaatgaact tggacaaaca tggatggaat ctggggtcag tgaaaatgca gtttcagggc 840
atatacagct tataattcct ggagaatctg cttgttttgc gtgtgctcca ccacttgtag 900
ttgctgcaaa tattgatgaa aagactctga aacgagaagg tgtttgtgca gccagtcttc 960
ctaccactat ggggtgtggtt gctgggatct tagtacaaaa cgtgttaaag tttctgttaa1020
atthttgtac tgtagttttt taccttggat acaatgcaat gcaggatttt tttctacta1080
tgtccatgaa gccaaatcct cagtgtgatg acagaaattg caggaagcag caggaggaat1140
ataagaaaaa ggtagcagca ctgcctaacc aagaggttat acaagaagag gaagagataa1200
tccatgaaga taatgaatgg ggtattgagc tggatatctga ggtttcagaa gaggaactga1260
aaaatttttc aggtccagtt ccagacttac ctgaaggaat tacagtggca tacacaattc1320
caaaaaagca agaagattct gtcactgagt taacagtgga agattctggt gaaagcttgg1380
aagacctcat ggccaaaatg aagaatatgt agataatgga ctgggatata ttgtatttct1440
catgttaaag cctcttccct tgaaattaaa aaaaaatttt aactgataaa acttagggca1500
acattaatta atgtatatct ttacctgaat tgttatactt tttgaaaatc ctgtgacttg1560
cctgtttctc cccgctccaa cgaaatcatt aactctccta aaatgtgttt cattctagta1620
agaaaacctc aaaggatatt gtaggatata aatcttactt gaaaacatag ctgttgaaat1680
gttttggcct tttggagtgg gggaaggaca aatctgatcc tgtaatcttt ttctttccag1740
taatcccttg tgtctgttgc atgaggacat ggacaataaa gtagtatatg atcctcagat1800
acaggggagaa ggacaaggca tacagcttat tgattagagc tggcaagcat ctgctcatta1860
tgttttggaat tgcttttctat aagaaaaattg cccactacta ctaacttgat caacaatgaa1920
ttcaaaatag ttaacctatg aaataacatc ctctcaaatg tttgctgatg aagtacaagt1980
tgaaatgtag ttattggaag agtctgtaac ctgtggatca tataatattca aagttagaca2040
aaggcaataa aaaagcagct attttcatga atagaaaaaa aaaaaatttc aggaagtata2100
aatttatattc tgcaccgaac aaggaacaga aattattgca tctgtggaag catatatctg2160
ggagttacta ttactttact ggaagggcca aggggc
2195

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(2) INFORMATION ON SEQ ID NO. 39:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1409 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

```

gtttgctgtc cttttttaaa ggattccaag ccatgtgaaa ttcccttctg gatgtgattc 60
tgggtcgcaa gtccttattt atatgtgagg ctggggaatg ggctgggggt attggcagtc 120
cttttgccagg gcagtgtgtg tgggtgggggt acaccgctgt ggcttagccc aagacactcc 180
cagaggaaaa cactgcagaa ggaactgggt tgcagactgt ggaaggatct gcagttttgt 240
ttttgaccaa aaaaataata ataagtttag tctgaagggc agagggaata cccaagcccc 300
tgatgcctat gagaagtccc tggacttcaa cctcctgtt gtttggcctt agcccagagg 360
gagctgctca cctgagcacc cttgggggtg ggcagagagg caggggtgga ttttagagtt 420
agtgtctgtg cgggggcagc cctgagcctg gaggttgagac tttggggtct cttagtttgg 480
agggtttgag tgcatttgtg cccctgcctg gttgagagct tcttgggtacc tcttgccacc 540
ccttctcact gccctgaccc aacccactg gaccttgatg ctgcgaggag tgggtgcctg 600
acggactcag cactcccgcc tgatgtattg gatcatagga gagcacttgc tctcctgcct 660
ctgccaggag agggcttgtt cctccaactc taggaggcca ggcaagcatg gacaggagcc 720
aaggagcag ggatcattaac ttttcttctt ttgcaaagtg ggcacttggc atcagggtcc 780
caatcaccag aaagcaccaa agcccctggc accccaccca ctccatccta cccagggacc 840
ccaagtaggc aactgttatg gcagtgggtc cagcccaggc cagcactgcc agcctcctct 900
ccctgcagta ggcaccagct ctacctcccc cggcaggcaa tgtcctggct tctcagccca 960
gcaccatctg ttccctaga cttctcaggg gccagcccag tctggggcac cctttgtttc1020
cctcatcctc ggctccaca caggtgacag acccagcaga tagcttctct ctgggaaagg1080
ttggatgctg ccttacatcc ccttctagcc ctctcccat ccacacacac aggcacccac1140
ccacaccagg tcggcttgtt tctccatgt agggagagag gggagaccaa cccctttgtg1200
tcttttgaaa tacgaagaaa aatgtgtgtt caggagcatg actccagtgc tgcgctcttg1260
ggcctagttc agtctgtctt gtctcaaate taggcatttt tgcttcaatt ttattttttt1320
taaaacattt ttttgggtgt cccgttggtt ttggaataat ttggctaaca ttggtaaaag1380
gtaagggggg taaaatataa ggtaattttt 1409

```

(2) INFORMATION ON SEQ ID NO. 40:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1084 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

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ggaatcttta agcaatcata cggggaaaaa gggcccatca ccttcaaagg agccacaatt 60
agactcctca acagacatga ttgaggctgg aagataaggg aatggtatct tcttcaaagc 120
cgaaagaata ggaccacacc tgccaggatt tgggtgttta aatataaatc tgatcacccc 180
cctgcttaga acccttctgc tttctattac ccctcattta aaatgtaaac tcttcacctt 240
ggtttatgag aactggttct tgccttcccc ttgaacctca ttaaagtgtg atttcttgct 300
aagctccagc ccgagtggtc tcctctcagc ttctaatttt gtgctctttc ctgccctttt 360
cctgggcctt ctgagctctc cccccccacc actcttgact cagggtggtg ccttcttctt 420
caagtcttga caattcccgg gcccttcagt ccctgagcag tctacttctg tgtctgtcac 480
cacatcttgt cttttccctt cattgcattt attgcagttt atatatatgc tacttttact 540
tgttcatttc tgtctcccct accaggctgt aaatgagggc agaaaccttg tttgttttat 600
tcaccatcat gtaccaagtg cttggcacat agtgggcctt cattaaatgt ttgttgaata 660
aaagagggaa gaaggcaagc caaccttagc tacaatccta ccttttgata aaatgttcct 720
tttgacaata tacacggatt attatttgta ctttgttttt ccatgtgttt tgcttttatc 780
cactggcatt tttagctcct tgaagacata tcatgtgtga gataacttcc ttcacatctc 840
ccatggtccc tagcaaaatg ctaggcctgt agtagtcaag gtgctcaata aatatttggt 900
tgggtggttt gtgagccttg ctgccaagtc ctgcctttgg gtcgacatag tatggaagta 960
tttgagagag agaacctttc cactcccact gccaggattt tgtattgcca tcgggtgccal020
aataaatgct catatttatt aaacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1080
aaaa
1084

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(2) INFORMATION ON SEQ ID NO. 41:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2860 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

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tcttggtga ttcttttctt ggcagttccc cttatgaggg ttacaactat ggctcctttg 60
agaatgtttc tggatctacc gatggtctgg ttgacagcgc tggcactggg gacctctctg 120
acggttacca gggccgctcc tttgaaccgg taggtactcg gccccgagtg gactccatga 180
gctctgtgga ggaggatgac tacgacacat tgaccgacat cgattccgac aagaatgtca 240
ttcgaccaa gcaatacctc tatgtggctg acctggcacg gaaggacaag cgtgttctgc 300
ggaaaaagta ccagatctac ttctggaaca ttgccaccat tgctgtcttc tatgcccttc 360
ctgtggtgca gctggtgatc acctaccaga cgggtggtgaa tgtcacaggg aatcaggaca 420
tctgctacta caacttcttc tgcgcccacc cactgggcaa tctcagcgcc ttcaacaaca 480
tcctcagcaa cctggggtag atcctgctgg ggctgctttt cctgctcatc atcctgcaac 540
gggagatcaa ccacaaccgg gcctgctgac gcaatgacct ctgtgccctg gaatgtggga 600
tccccaaaca ctttgggctt ttctacgcca tgggcacagc cctgatgatg gaggggctgc 660
tcagtgtttg cgatcatgtg tgccccaact ataccaattt ccagtttgac acatcgttca 720
tgtacatgat cgccggactc tgcatgctga agctctacca gaagcggcac ccggacatca 780
acgccagcgc ctacagtgcc tacgcctgcc tggccattgt catcttcttc tctgtgctgg 840
gcgtggtctt tggcaaaggg aacacggcgt tctggatcgt cttctccatc attcacatca 900
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ggatcttccg ccgcctcctc cacgtgctct acacagactg catccggcag tgcagcgggc 1020
cgctctacgt ggaccgcatg gtgctgctgg tcatgggcaa cgctcatcaac tggtcgctgg 1080
ctgcctatgg gcttatcatg cgccccaatg atttcgcttc ctacttgttg gccattggca 1140

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tctgcaacct gctcctttac ttgcctttct acatcatcat gaagctccgg agtggggaga1200
ggatcaagct catccccctg ctctgcatcg tttgcacctc cgtggtctgg ggcttcgcgc1260
tcttcttctt cttccaggga ctcagcacct ggcagaaaac ccctgcagag tcgaggagc1320
acaaccggga ctgcatcctc ctgcacttct ttgacgacca cgacatctgg cacttcctct1380
cctccatcgc catgttcggg tccttcctgg tggtgctgac actggatgac gacctggata1440
ctgtgcagcg ggacaagatc tatgtcttct agcaggagct gggcccttcg cttcacctca1500
aggggcccctg agctcctttg tgtcatagac cggtcactct gtcgtgctgt ggggatgagt1560
cccagcaccg ctgcccagca ctggatggca gcaggacagc caggtctagc ttaggcttgg1620
cctgggacag ccatggggtg gcatggaacc ttgcagctgc cctctgccga ggagcaggcc1680
tgctcccctg ggacccccag atgttggcca aattgctgct ttcttctcag tgttggggcc1740
ttccatgggc ccctgtcctt tggctctcca tttgtccctt tgcaagagga aggatggaag1800
ggacaccctc ccattttcat gccttgcat tggcccgctc tcctccccac aatgccccag1860
cctgggacct aaggcctctt tttcctccca tactccact ccaggggcta gtctggggcc1920
tgaatctctg tcctgtatca gggccccagt tctctttggg ctgtccctgg ctgccatcac1980
tgcccattec agtcagccag gatggatggg ggtatgagat tttgggggtt ggccagctgg2040
tgccagactt ttggtgctaa ggccctgcaag gggcctgggg cagtgcgtat tctcttcct2100
ctgacctgtg ctcagggtg gctcttttagc aatgcgctca gccaatttg agaaccgcct2160
tctgattcaa gaggctgaat tcagaggcca cctcttcctc ccactcagctc ccagactgat2220
gccagcacca ggactggagg gagaagcgcc tcaccccttc ccttccttct ttccaggccc2280
ttagtcttgc caaaccaccag ctggtggcct ttcagtcca ttgacactgc ccaagaatgt2340
ccaggggcaa aggagggatg atacagagtt cagcccgttc tgctccata gctgtgggca2400
ccccagtgcc taccttagaa aggggcttca ggaagggatg tgctgtttcc ctctacgtgc2460
ccagtcctag cctcgctcta ggaccaggg ctggcttcta agtttccgtc cagtcttcag2520
gcaagttctg tgtagtcat gcacacacat acctatgaaa ccttgagatt taaaaagaat2580
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gtgtttttct cccaaacttg tttttatagc tctgcttgaa gggctgggag atgaggtggg2760
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atttgcatte aataaacaac cagactcaga taaaaaaaaa 2860

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(2) INFORMATION ON SEQ ID NO. 42:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2137 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

```

gtccgctttc gtctccgtcc tgctgccgtt accgccgctg ctgccgccgc ttgctgtccc 60
cgctccgggtc tgtgggtgcag ccgggaccca ggaccatgtc tctgtctcgc tcagaggaga 120
tgcaccgggtc cacggaaaat gtctataaga ccatcatgga gcagttcaac cctagcctcc 180
ggaacttcat cgccatgggg aagaattacg agaaggcact ggcaggtgtg acgtatgcag 240
ccaaaggcta ctttgacgcc ctggtgaaga tgggggagct ggccagcgag agccagggt 300
ccaaagaact cggagacgtt ctcttccaga tggctgaagt ccacaggcag atccagaatc 360
agctggaaga aatgctgaag tcttttcaca acgagctgct tacgcagctg gagcagaagg 420
tggagctgga ctccaggtat ctgagtgtct cgctgaagaa ataccagact gagcaaagga 480
gcaaaggcga cgccctggac aagtgtcagg ctgagtgtga gaagcttcgg aagaagagcc 540
agggcagcaa gaatcctcag aagtactcgg acaaggagct gcagtacatc gacgccatca 600
gcaacaagca gggcgagctg gagaattacg tgtccgacgg ctacaagacc gactgacag 660
aggagcgag gcgcttctgc ttctgtgtgg agaagcagtg cgccgtggcc aagaactccg 720
cggcctacca ctccaagggc aaggagctgc tggcgagcaa gctgccgctg tggcaacagg 780
cctgtgccga ccccagcaag atcccgagc gcgcggtgca gctcatgcag caggtggcca 840
gcaacggcgc caccctcccc agcgccctgt cgccctccaa gtccaacctg gtcatttccg 900
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ggatgtctgc ccaggagagc acacccatca tgaacggcgt cacaggcccg gatggcgagg 1020
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ctcagagcaa gctcagcgac tccactcca acacactccc cgtgcgcaag agcgtgacct 1140
caaaaaacag ctatgccacc accgagaaca agactctgcc tcgctcgagc tccatggcag 1200
ccggcctgga gcgcaatggc cgtatgcggg tgaaggccat cttctccac gctgctgggg 1260
acaacagcac cctcctgagc ttcaaggagg gtgacctcat taccctgctg gtgctggggc 1320
cccgcgatgg ctggcactac ggagagagtg agaagaccaa gatgcggggc tggtttccct 1380
tctcctacac ccgggtcttg gacagcgatg gcagtgacag gctgcacatg agcctgcagc 1440
aagggaagag cagcagcacg ggcaacctcc tggacaagga cgacctggcc atcccacccc 1500
ccgattacgg cgccgcctcc cgggccttcc ccgcccagac ggccagcggc ttcaagcaga 1560
ggccctacag tgtggccgtg cccgccttct cccagggcct ggatgactat ggagcgcggt 1620
ccatgagcag cgccgatgtg gaagtggcca gattctgagc cgcctgacta gagttagaat 1680
ccctttgccc acgtccagct gaagccgaca gtgaccaacg acaggtctgc cccctcctc 1740
agctgatggc cacatctgca gtgctgccc tctggtggct tccccgccc tccccatgta 1800
gcctgttctg tcatcatctg tgcgttctct tgtagagaac atccaggccc cggctgcctg 1860
gtcttgcccc acttgagtct ggcctggact ggatcccage tgttctaggg agggccgggc 1920
agagtggggc gcaggccctt gaagggcgag acccagtggc tgggctgccc agggctgagg 1980
ggccgcctct tgaggggtaca cgctctgtgt cacatggcca tggagccttg ggtacccctg 2040
agttaaggga ggacatttgg ccagctgggt gctgggaggg gagcctggct gccctgctgc 2100
ttctcctgcc taataaacag gcttctcctg caaaaaa

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2137

(2) INFORMATION ON SEQ ID NO. 43:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2410 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

ttgagcagac	acaggtgcag	gcagtgggtga	ctctacaggc	cctgctattc	egggcccttt	60
tgcaacgttg	tggaacaat	aaaattttga	cgtagccatc	ctccatttgg	aagtctgggtg	120
gctggtttgc	cgtggaaatg	accctgtttt	tatttccaga	attacctctg	ggttttagaga	180
agtggttttt	aaacgagtgt	gggtaaaaaa	aattacctga	ggtacttgtc	agagtgcgag	240
acttctaggt	cccaccagc	tctcatcaat	cagtttagtg	aggggtgggtg	ccaggactct	300
gattttaaac	atacccttag	aaagattctg	atacaggtag	aggtgagaag	ccctggttta	360
gaggcagctc	ggcctccctt	catggtggga	ccagggccag	cagggaatgt	cagggccacc	420
cctgaacttc	actgtgactt	ctggcttgca	gagggtggcc	cgggaggaga	tgggtgggagg	480
agctcaacag	cgggaagggtg	atgtacgcct	tctgcagagt	gaaggacccc	aactctggac	540
tgccccaaatt	tgtcctcatc	aactggacag	gcgagggcgt	gaacgatgtg	cgggaaggagg	600
cctgtgccag	ccacgtcagc	accatggcca	gcttcctgaa	gggggcccat	gtgaccatca	660
acgcacgggc	cgaggaggat	gtggagcctg	agtgcacat	ggagaagggtg	gccaaggcctt	720
caggtgccaa	ctacagcttt	cacaaggaga	gtggccgctt	ccaggacgtg	ggacccagg	780
ccccagtggg	ctctgtgtac	cagaagacca	atgccgtgtc	tgagattaaa	agggttggta	840
aagacagctt	ctgggccaaa	gcagagaagg	aggaggagaa	ccgtcggctg	gaggaagagc	900
ggcggggccga	ggaggcacag	cggcagtggga	gcaggagcgc	cgggagcgtg	agtgcgtgag	960
gctgcacgcc	gggagcagcg	ctatcaggag	cagggtggcg	aggccagccc	ccaggaggacg	1020
tgggagcagc	agcaagaagt	ggtttcaagg	aaccgaaatg	agcaggagtc	tgccgtgcac	1080
ccgaggggaga	ttttcaagca	gaaggagagg	gccatgtcca	ccacctccat	ctccagtcct	1140
cagcctggca	agctgaggag	ccccttcctg	cagaagcagc	tcacccaacc	agagacccac	1200
tttggcagag	agccagctgc	tgccatctca	aggcccaggg	cagatctccc	tgctgaggag	1260
ccggcgccca	gcactcctcc	atgtctggtg	caggcagaag	aggaggctgt	gtatgaggag	1320
cctccagagc	aggagacctt	ctacgagcag	ccccactgg	tgcagcagca	aggtgctggc	1380
tctgagcaca	ttgaccacca	cattcagggc	caggggctca	gtgggcaagg	gctctgtgcc	1440
cgtgcctgt	acgactacca	ggcagccgac	gacacagaga	tctcctttga	ccccgagaac	1500
ctcatcacgg	gcatcgaggt	gatcgacgaa	ggctgggtggc	gtggctatgg	gccggatggc	1560
cattttggca	tgttccctgc	caactacgtg	gagctcattg	agtgaggctg	agggcacatc	1620
ttgcccttcc	cctctcagac	atggcttcct	tattgctgga	agaggaggcc	tgggagttga	1680
cattcagcac	tcttccagga	ataggacccc	cagtgaggat	gaggcctcag	ggctccctcc	1740
ggcttggcag	actcagcctg	tcaccccaaa	tgcagcaatg	gcctgggtgat	tcccacacat	1800
ccttccctgca	tcccccgacc	ctcccagaca	gcttggctct	tgccccgac	aggatactga	1860
gccaaagccct	gcctgtggcc	aagccctgag	tggccactgc	caagctgcgg	ggaaggggtcc	1920
tgagcagggg	catctgggag	gctctggctg	ccttctgcat	ttatttgcct	tttttctttt	1980
tctcttgctt	ctaaggggtg	gtggccacca	ctgttttagaa	tgacccttgg	gaacagtga	2040
cgtagagaat	tgttttttagc	agagttttgtg	accaaagtca	gagtggatca	tgggtggtttg	2100
gcagcagggga	atttgtcttg	ttggagcctg	ctctgtgctc	cccactccat	ttctctgtcc	2160
ctctgcctgg	gctatgggaa	gtggggatgc	agatggccaa	gctcccaccc	tgggtattca	2220
aaaacggcag	acacaacatg	ttcctccacg	cggctcactc	gatgcctgca	ggccccagtg	2280
tgtgcctcaa	ctgattctga	cttcaggaaa	agtaacacag	agtggccttg	gcctgttgct	2340
ttcccctatt	ttctgtccca	gctcatccgt	gtctctgaag	aacaaatatg	cttttggacc	2400
aaaaaaaaa						2410

(2) INFORMATION ON SEQ ID NO. 44:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2333 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

tgaaaaatgc	ggacagtata	ttcagaaagg	ctattccaag	ctcaagatat	ataattgtga	60
actagaaaat	gtagcagaat	ttgagggcct	gacagacttc	tcagatacgt	tcaagttgta	120
ccgaggcaag	tcggatgaaa	atgaagatcc	ttctgtggtt	ggagagttaa	agggctcctt	180
tcggatctac	cctctgccgg	atgaccccag	cgtgccagcc	cctcccagac	agtttcggga	240
attacctgac	agcgtcccac	aggaatgcac	ggttaggatt	tacattgttc	gaggcttaga	300
gctccagccc	caggacaaca	atggcctgtg	tgacccttac	ataaaaaata	cactgggcaa	360
aaaagtcatt	gaagaccgag	atcactacat	tcccaacact	ctcaaccagg	tctttggeag	420
gatgtacgaa	ctgagctgct	acttacctca	agaaaaagac	ctgaaaattt	ctgtctatga	480
ttatgacacc	tttaccgggg	atgaaaaagt	aggagaaaca	attattgatc	tggaaaaccg	540
attcctttcc	cgcctttggg	cccactgcgg	cataccagag	gagtactgtg	tttctggagt	600
caatacctgg	cgagatcaac	tgagaccaac	acagctgctt	caaaatgtcg	ccagattcaa	660
aggcttccca	caaccatcc	tttccgaaga	tgggagtaga	atcagatatg	gaggacgaga	720
ctacagcttg	gatgaatttg	aagccaacaa	aatcctgcac	cagcacctcg	gggcccctga	780
agagcggctt	gctcttcaca	tcctcaggac	tcaggggctg	gtccctgagc	acgtggaaac	840
aaggactttg	cacagcacct	tccagcccaa	catttcccag	ggaaaacttc	agatgtgggt	900
ggatgttttc	cccaagagtt	tggggccacc	aggccctcct	ttcaacatca	caccccgga	960
agccaagaaa	tactacctgc	gtgtgatcat	ctggaacacc	aaggacgtta	tcttggacga	1020
gaaaagcatc	acaggagagg	aaatgagtga	catctacgtc	aaaggctgga	ttcctggcaal	1080
tgaagaaaac	aaacagaaaa	acagatgtcca	ttacagatct	ttggatgggt	aagggaattt	1140
taactggcga	tttgttttcc	cgtttgacta	ccttccagcc	gaacaactct	gtatcgttgc	1200
gaaaaaagag	cattttctgga	gtattgacca	aacggaattt	gcaatcccac	ccaggctgat	1260
cattcagata	tgggacaatg	acaagttttc	tctggatgac	tacttgggtt	tcctagaact	1320
tgacttgctg	cacacgatca	ttcctgcaaa	atcaccagag	aaatgcaggt	tggacatgat	1380
tccggacctc	aaagccatga	acccccttaa	agccaagaca	gcctccctct	ttgagcagaa	1440
gtccatgaaa	ggatggtggc	catgctacgc	agagaaagat	ggcgcccgcg	taatggctgg	1500
gaaagtggag	atgacattgg	aaatcctcaa	cgagaaggag	gccgacgaga	ggccagccgg	1560
gaaggggcgg	gacgaaccca	acatgaaccc	caagctggac	ttaccaaatc	gaccagaaac	1620
ctccttcctc	tgggttcacca	acccatgcga	gaccatgaag	ttcatcgtgt	ggcgccgctt	1680
taagtgggtc	atcatcggct	tgctgttctc	gcttatcctg	ctgctcttcg	tggccgtgct	1740
cctctactct	ttgccgaact	atttgtcaat	gaagattgta	aagccaaatg	tgtaaacaaag	1800
gcaaaggctt	cattttcaaga	gtcatccagc	aatgagagaa	tcctgcctct	gtagaccaac	1860
atccagtgtg	attttgtgtc	tgagaccaca	ccccagtagc	aggttacgcc	atgtcaccga	1920
gccccattga	ttcccagagg	gtcttagtcc	tggaaagtca	ggccaacaag	caacgtttgc	1980
atcatgttat	ctcttaagta	ttaaaagttt	tattttctaa	agttttaaata	atgtttttca	2040
aaatattttt	caagggtggc	ggttccattt	aaaaatcatc	tttttatatg	tgtcttcggg	2100
tctagacttc	agctttttgga	aattgctaaa	tagaattcaa	aaatctctgc	atcctgaggt	2160
gatataacttc	atatttgtaa	tcaactgaaa	gagctgtgca	ttataaaaatc	agttagaata	2220
gttagaacia	ttcttattta	tgcccacaac	cattgctata	ttttgtatgg	atgtcataaa	2280
agtctattta	acctctgtaa	tgaaactaaa	taaaaatggt	tcacctttaa	aac	2333

(2) INFORMATION ON SEQ ID NO. 45:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1612 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

```

gtcttctttt ttttcttttt tttttttttt tttttttttt cctgtggaag tgcttttatt 60
agcagtaagg ctgatcgtaac aaaaaattct cagagcttca taggacaagg tagtacaagt 120
atggatgata caggactgag gaacggggga cggctcaaaa gaaatcaaca tcgtctgggg 180
catccagggtc ccgatattcc acaatggccc ttgggtctcc acgaaccatc ctgttgcgag 240
gtttcccagg ataacctccc tggcctcgga aggcatacata gttccctoga ccagcaccat 300
acggggcatg ggggtatgga gggcctcctg tggggactgc agggcggaac gcaccagctc 360
catagcccaa gatcgggggc cggggctgac catagggcat caggccctgg ggagtctggg 420
gtgggtaggg gagtcctggg gtcaaacctg gggggagtat ctgggcgggc ccagggtggc 480
gggctggctt gatctcaggc agagctgggc gcttagcatc agtgagggaag ttgttaaaaa 540
acgcgacttc ctttttcaact tcctcaattt tctctgcatg cttgttgaag atatgtttgc 600
gcacaaactc aggacccttg aatttcttgc cactgagagg acacagccac ttatccttgc 660
ccagttcctg cgtgttgagg gtgacgaact tctccacttc ctgctctggg tctttgcgcc 720
ccatcttctg ggcctcttcc tctgagagtg actccgcac actcagcaac ggcgtgagct 780
tctcctcaaa agtcttctgc cactccagca cttcccctg actgatgcgg ttgggtggca 840
tgggcccccg aacgtggatg atcccacagc gattgggcat ctgctcctcg ttgggttact 900
cacagggtgt gtaataatcc aaggaatgca cgatgcgcag gtaaaggagg agcttgtcca 960
agaccttaat caacttctca tcccgtctca cgttgatctc tgccgggttc ccttccttag 1020
gaggctcctc aggaggagcg ccccgtctgc tcccagcag ctctcctcc tcggcgctta 1080
cttcctcgat caggtagtcg gtgatattct tcaagatcgg gttttgcgag ggcaggctcg 1140
tgggcagggg aggcgtccct gggtctgagg ccaaagctg tgcctgtca tccagcgtgt 1200
ggatcagctt ggccgccagc ttgatgtcgt tgcgcacaat ctgcttgtgc tgggtgatgc 1260
cgttgatgtt gcgaacgcgc cgggtcaggc ccctgttcac accagggtc agctcacact 1320
ccgggagacg gatgttctgc aggttccaac agatctctt aatgttaaca ctgcggctga 1380
aggtcaccca gccacgacgg aaaaacctcc tctctggctg gggctctgag agcgccaccc 1440
gcataaagcc tgggtacctt ttacaaaggg agatgatctc ggcccgagg atgttgggcg 1500
cgatgttgcg catgaagagg gagcaggtct tatgcagcgg ccgcggttg cactccagcc 1560
ccgcggcgct cttgggcttc tccattctt cttccttggg cttctccttc tc 1612

```

(2) INFORMATION ON SEQ ID NO. 46:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1106 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

```

gaaagctctg gctttcaggc tataggaaga gcagaagatg atgccagaag ttgctggggt 60
aaaaccagcg agtccaccg tccttaccag ctcttcagaa ggcggagacc gaccctgata 120
acttacogga tatttcgtca cagaagacac aaagacacat ccagcgggga ccacctcacc 180
tgcagattag acccccaagc caaagacctg aaggatggga cccaggagga ggccacaaaa 240
aggcaagaag cccctgtgga tccccgcccc gaaggagatc cgcagaggac agtcatcagc 300
tggaggggag cggatgatcga gcctgagcag ggcaccgagc tcccttcaag aagagcagaa 360
gtgcccacca agcctcccct gccaccggcc aggacacagg gcacaccagt gcatctgaac 420
tatcgccaga agggcgtgat tgacgtcttc ctgcatgcat ggaaaggata ccgcaagttt 480
gcatggggcc atgacgagct gaagcctgtg tccaggtcct tcagtgagtg gtttggcctc 540
ggtctcacac tgatcgacgc gctggacacc atgtggatct tgggtctgag gaaagaattt 600
gaggaagcca ggaagtgggt gtcgaagaag ttacactttg aaaaggacgt ggacgtcaac 660
ctgtttgaga gcacgatccg catcctgggg gggctcctga gtgcctacca cctgtctggg 720
gacagcctct tcctgaggaa agctgaggat tttggaaatc ggctaatagcc tgccttcaga 780
acaccatcca agattcctta ctcgatgtg aacatcggtc ctggagtgc ccaccgcca 840
cgggtggacct ccgacagcac tgtggccgag gtgaccagca ttcagctgga gttccgggag 900
ctctcccgtc tcacagggga taagaagttt caggaggcag tggagaaggt gacacagcac 960
atccacggcc tgtctgggaa gaaggatggg ctggtgcccc tgttcatcaa taccacagtt 1020
gggcctgttt caccacactg gggcgtatct caggtggggg cgccaggggc cgacagctta 1080
ttattgagtt acctgtttga aaggca

```

(2) INFORMATION ON SEQ ID NO. 47:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1370 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

```

gcggtggcga ggggcgtaac ggttgttgta gtccggcccc ctcttggtg gtccagccac 60
attaaccggc aggatgtcgg aggtgcggct gccaccgcta cgcgccctgg acgactttgt 120
tctggggctc ggcggtctgg cggctccgga tccatgcgac ccgcagcgat ggtgccaccg 180
cgtcatcaac aacctcctct actaccaaac caactacctt ctctgcttcg gcatcggcct 240
cgctctcgcc gggtagctgc ggccacttca tacgctcctg agcgcgctgg tagtggcggt 300
ggccctcgcc gtgctggtgt gggcagctga gaccgcgca ctgtgcgccg ctgccgccgc 360
agccaccctg cagcctgcct ggccgcagtg cttgccgtcg gcctcctggt gctctgggtc 420
gcgggcggcg cttgcacctt cctgttcagc atcgccgggc cgggtgcttct gatcctggtg 480
cacgcctcgt tgcgcctgcg caaccttaag aacaagattg agaacaagat cgagagcatt 540
ggtctcaagc ggacgccaat gggcctgcta ctagaggcac tgggacaaga gcaggaggct 600
ggatcctagg cccctgggat ctgtaccag gacctggaga ataccacccc acccccagcc 660
cataattggg acccagagcc ctttcccagc acttaaaaca ggagcctaga gccccctgcc 720
caaacaaaac aggacatctg tgaccgccct acccccacgc cagccccaaa ctaagatata 780
cctcacaccc agccccatt acctagggac aagagtcttc cccagccttg aacctaggac 840
caagagccac ctacatccag ccccaaaact ggggcttcag gccagagcat ccatggccaa 900
tttcaaattg tgaaccaga gacactccca tccacccttc tccatgctca tccccaaact 960
ggggcctgga gcaaggcact ctcaaactct gaaccctgga ccaaagcttt tccagacccc 1020
accctacctt ccaaccagc tcaagacatt gccaaactct gaactcagaa cccaagtgtt 1080
ccatgcccc tgttggtatg agtcgggtat cctgactgtt ggacccctgg tccaggtgat 1140
cccgaccctc accagtccca tttgcctccc tccagctctg cttaggcatt ttgcccctca 1200
ccccaatgtt ccacaccatc gacaaccaag gggtaggtg gggacaggcc tcagcaggga 1260
atggggcgta tatgttagtg ttgctgcaac aataaagcct gttgcatctc tcatgccaaa 1320
aaaaaaaaa aagtcgaccg gccgcaaata tagtagtagt agtcgtccgc 1370

```

(2) INFORMATION ON SEQ ID NO. 48:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 617 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

```
ctcgtagttt attaaatgat gtacaatttg gccagtttgg agatgacca aaggaggaag 60
taatggttct ggagagaatc ttactggcag accatcaagg ttgatttaca ggtagaacat120
ccataccagt tcctactaaa atatgcaaag caactcaaag gtgataaaaa caaaattcaal80
aagttgggtc aaatggcatg gacatttgta aatgacagtc tctgcaccac cttgtcactg240
cagtgggaac cagagatcat agcagtagca gtgatgtatc tcgcaggacg tttgtgcaaa300
tttgaaatac aagaatggac ctccaaaccc atgtatagga gatgggtggga gcagtttggt360
caagatgtcc cggtcgacgt tttggaagac atctgccacc aaatcctgga tctttactca420
caaggaaaac aacagatgcc tcatcacacc ccccatcagc tgcaacagcc cccatctcct480
gagcctccca ccccgctgcc tgggcccctgt ggttgctggg cctcccacct caaggagggg540
aaggttgtac agcccgaacc cgtggagcaa tgccctgtct ggcctccaaa accaaaataa600
aactgggtca ctttaaa 617
```

(2) INFORMATION ON SEQ ID NO. 49:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1899 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

tgtgtgagggc	ccaacagcgg	aatcatcgat	gcaggggcct	gaattaatgt	atctgtgatg	60
ttacagcctt	tcgattatga	tccaatgag	aaaagtaaac	acaggttatg	gttcagtcta	120
tgtttgctcc	aactgacact	tcagatatgg	aagcagtatg	gaaggaggca	aaaccggaag	180
accttatgga	ttcaaaactt	agatgtgtgt	ttgaattgcc	agcagagaat	gataaaccac	240
atgatgtaga	aataaataaa	attatatcca	caactgcac	aaagacagaa	acaccaatag	300
tgtctaagtc	tctgagttct	tctttggatg	acaccgaagt	taagaagggt	atggaagaat	360
gtaagaggct	gcaagggtgaa	gttcagaggc	tacgggagga	gaacaagcag	ttcaagggaag	420
aagatggact	gcggatgagg	aagacagtgc	agagcaacag	ccccatttca	gcattagccc	480
caactgggaa	ggaagaaggc	cttagcaccc	ggctcttggc	tctgggtgggt	ttgttcttta	540
tcgttgggtg	aattattggg	aagattgcct	tgtagaggta	gcatgcacag	gatggtaaata	600
tggattgggtg	gatccaccat	atcatgggat	ttaaatttat	cataaccatg	tgtaaaaaga	660
aattaatgta	tgatgacatc	tcacagggtc	tgcctttaa	ttaccctctc	ctgcacacac	720
atacacagat	acacacacac	aaatataatg	taacgatctt	ttagaaagtt	aaaaatgtat	780
agtaactgat	tgaggggggaa	agaatgatc	tttattaatg	acaagggaaa	ccatgagtaa	840
tgccacaatg	gcatattgta	aatgtcattt	taaacattgg	taggccttgg	tacatgatgc	900
tggattacct	ctcttaaaat	gacacccttc	ctcgccctgt	ggtgctggcc	cttggggagc	960
tggagcccag	catgctgggg	agtgcggtca	gctccacaca	gtagtcccca	cgtggcccac	1020
tcccggccca	ggctgctttc	cgtgtcttca	gttctgtcca	agccatcagc	tccttgggac	1080
tgatgaacag	agtcagaagc	caaagggaat	tgcactgtgg	cagcatcaga	cgtactcgct	1140
ataagtgaga	ggcgtgtgtt	gactgattga	cccagcgctt	tggaaataaa	tggcagtgtc	1200
ttgttcactt	aaagggaacca	agctaaattt	gtattgggtc	atgtagtga	gtcaaaactgt	1260
tattcagaga	tgtttaatgc	atatttaact	tattttaatg	atttcatctc	atgttttctt	1320
attgtcacaa	gagtacagtt	aatgctgcgt	gctgctgaac	tctgttgggt	gaactggtat	1380
tgctgctgga	gggctgtggg	ctcctctgtc	tctggagagt	ctgggtcatgt	ggagggtgggg	1440
tttattggga	tgctggagaa	gagctgccag	gaagtgtttt	ttctgggtca	gtaaataaca	1500
actgtcatag	ggagggaat	tctcagtagt	gacagtcaac	tctaggttac	cttttttaata	1560
gaagagtagt	cagtcttcta	gattgttctt	ataccacctc	tcaaccatta	ctcacacttc	1620
cagcgcccag	gtccaagtct	gagcctgacc	tccccttggg	gacctagcct	ggagtcaggga	1680
caaatggatc	gggctgcaga	gggttagaag	cgagggcacc	agcagttgtg	gggtggggagc	1740
aagggaagag	agaaactctt	cagcgaatcc	ttctagtact	agttgagagt	ttgactgtga	1800
attaatttta	tgccataaaa	gaccaaccca	gttctgtttg	actatgtagc	atcttgaaaaa	1860
gaaaaattat	aataaagccc	caaaattaag	aaataaaaa			1899

(2) INFORMATION ON SEQ ID NO. 50:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1398 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

```

agaatgtcgg gcggtgctgc gaggcccaag cccggggccgg ggccgectcc ctcaacgcct 60
cccttgacgg cctccacaac gcactcttcg ccactcagcg cagcttggag cagcaccagc 120
ggctcttcca cagcctcttt gggaacttcc aagggtcat ggaagccaac gtcagcctgg 180
acctggggaa gctgcagacc atgctgagca ggaaagggaa gaagcagcag aaagacctgg 240
aagctccccg gaagagggac aagaaggaag cggagccttt ggtggacata cgggtcacag 300
ggcctgtgcc aggtgccttg ggcgggcgcg tctgggaggc aggatccccct gtggccttct 360
atgccagctt ttcagaaggg acggctgccc tgcagacagt gaagttcaac accacataca 420
tcaacattgg cagcagctac ttccctgaac atggctactt ccgagcccct gagcgtggtg 480
tctacctgtt tgcagtgagc gttgaatttg gccagggcc aggcaccggg cagctggtgt 540
ttggagggtc ccatcggact ccagtctgta ccactgggca ggggagtggg agcacagcaa 600
cggctcttgc catggctgag ctgcagaagg gtgagcgagt atggtttgag ttaaccagg 660
gatcaataac aaagagaagc ctgtcgggca ctgcatttgg gggcttcctg atgtttaaga 720
cctgaacccc agccccaatc tgatcagaca tcatggactc gccagctct cctcggcctg 780
gggctctggc caaggatggg ctggagggtc ttcagttggt ctgtctcttc cctggaaacc 840
ttctgcaaag atggtgtggt gtacgtggct tccctgtaac cacatggggc ttggccattt 900
ctccatgatg agaaggactg gaatgttct cggggcagga catggtccta ggaagcctga 960
accttggctt ggcattgcct ctcagacagc acggcctggg ctccaactct tcaccacacc 1020
ctgtattcta caacttcttt ggtgttttgc tcctcctgtg gttggaaact tctgtacaac 1080
actttaaaact tttctcttgc ttctcttct cttctccct atcgtatgat agaaagacat 1140
tcttccccag gaggaatgtt taaaatggag gcaacatttt ggccaacatt ggaaagcact 1200
agagggcaat gggattaaac caacctgctt ggtctctatt agtcagtaat gaagacgaca 1260
gcctggccaa ccaagggaaa ggaaattagt atctttagtt tcagtcattc cttgtagggg 1320
tatgggtttt agcttgtggc cccaccgaa aagattcatc ttggattgtt aatgcctatt 1380
attccccaca ttaagggg                                     1398

```

(2) INFORMATION ON SEQ ID NO. 51:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1340 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

```

tttggcatca tttacaattt catagaatta ctgtgaaggc ctttctagtt gagatggttg 60
ggtatttggg attctaattg ttaaccccag aagaaggtaa tttagcttgt atttatttaa 120
aaccatttta gccttttact tatactctgg agaattccag tgatcatcct aataaggat 180
atttcagaat aatttttttt tccttcagaa taacttagaa tcagatgcta taagggtcc 240
taggagcagt gtgaaatttc cgtaaagata aatttgaatg ttgtaaccaa gtttatatta 300
aaccaagagg ccatttccaa tatgattttt tgtttctttt taacttgta agtccttaag 360
agattacatg ctagggttg agtcatttct attgtagata atgatggccc acacagtcac 420
cttcaactat ccacataagc taggctttcc gcttttgcca cggacagtgt gaccaagata 480
tttccagagt aaataaccca ccacaacctt ggtaattcct cttttcttct taagctccag 540
gaagcgaaag cagaaggact cttttcagac tgccctctgt agcctacatt gcagctttcc 600
aaaacaggca gctagcactg ggaaagccca tgtggtgacc ccatattttt ctgaggttct 660
tcttttccat ggtgttactt tattatcaga aagtaaattc agaaaacagg tcttgccctt 720
agcagacaag aaccacacca gtttcttgta aaggtaacgg atacattggg attcaggagt 780
gacacagagg tccagcccca gaacttgtaa ggattttgtt tgaacactga gcagatgcct 840
cctccctgcc acccatcaca ctagttaggg ctggccatga attctatgcc agagtcactc 900
ctgcagtctg ctagggatgg gccttcttat cccactctcg cacacatccc agtctagtct 960
ttgccttcac agagtcctcc ttgacacccc tgacttaatg atagttgctg ttttgagtal1020
gaattgatca ggtttaagtc atcctgctca ggttgggcat agtggctcat gcctgtaatc1080
tcagcacttt gggaagccaa agtgggagga ttgcttgagc ccaggagtgc caaacatcc1140
tgggcaacag agggagaccc tgtctctacc aagaaaaaaa aaaaaaaaaa aaagttaaaa1200
aaacaattag ctggacctgg tgggtgcacac tcagtaggct gaggtgaaag gattcctttal260
acatgggaga ctgaagatgc agtgagccat gaatcagcaa ctgcacacca gtatgagagal320
aaaagtggaa ccctatcaca                                     1340

```

(2) INFORMATION ON SEQ ID NO. 52:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 315 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

```

atcagcacat caattgcagc attgtggcta ccaggggggtc aggatgcggg cgggtggagcc 60
ctctggcctt tgtgtggtag ccgaggactc tgtgtcagcg accgttttcc gggaaacttc120
cgggcgagac tcacatcttg gaaattcaaa tactcaatag ctctcgaatt ctaggaatct180
tgagaagagg cctggattaa ggattcagac gtgggccctc agatggctat ggcattgctg240
gttctaccaa cgtgacaggt gatcaagtta agaagctgga cgtcctctcc aacgacctgg300
gtatggaaca ggta                                     315

```

(2) INFORMATION ON SEQ ID NO. 53:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1162 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

```

cggctcgagc ggctcgagat tcgaggctcgt ggtggtcttg gaagagcgtc gagggggccg 60
tggaactgga atgggcccag gagatggatt tgattctcgt ggcaaactg aatttgatag 120
gcatagtgga agtgatagat ctggcctgaa gcacgaggac aaacgtggag gtagcggatc 180
tcacaactgg ggaactgtca aagacgaatt aacagagtcc cccaaataca ttcagaaaca 240
aatatcttat aattacagtg acttggatca atcaaagtgt actgaggaaa cacctgaagg 300
tgaagaacat catccagtgg cagacactga aaataaggag aatgaagttg aagaggtaaa 360
agaggagggt ccaaaagaga tgactttgga tgagtggaag gctattcaaa ataaggaccg 420
ggcaaaagta gaatttaata tccgaaaacc aaatgaaggt gctgatgggc agtggaaaga 480
gggatttggt cttcataaat caaagagtga agaggctcat gctgaagatt cggttatgga 540
ccatcatttc cggaagccag caaatgatat aacgtctcag ctggagatca attttgga 600
ccttgccgc ccaggacgtg gcggcagggg aggacgaggt ggacgtgggc gtggtgggcg 660
cccaaaccgt ggcagcagga ccgacaagtc aagtgttct gctcctgatg tggatgacc 720
agaggcattc ccagctctgg cttaactgga tgccataaga caaccctggt tcctttgtga 780
acccttctgt tcaaagcttt tgcattgcta aggattccaa acgactaaga aattaaaaaa 840
aaaaagactg tcattcatac cattcacacc taaagactga attttatctg ttttaaaaaa 900
gaacttctcc cgctacacag aagtaacaaa tatggtagtc agttttgtat ttagaaatgt 960
attggtagca gggatgtttt cataattttc agagattatg cattcttcat gaatactttt 1020
gtattgctgc ttgcaaatat gcatttccaa acttgaaata taggtgtgaa cagtgtgtac 1080
cagttaaaaa aatcacaaaa aaaaaaaatt ttaattaagg atttagaagt tcccccaatt 1140
acaaactggt tttaaatatt gg
1162

```

(2) INFORMATION ON SEQ ID NO. 54:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1826 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

cggctcgagg	ccccgccect	gttcgccccg	cgccaccggc	cgcgcceccg	ccatggaggga	60
cctggatgcc	ctgctctctg	acctggagac	taccacctcg	cacatgccaa	ggtcaggggc	120
tcccaaagag	cgccctgceg	agcctctcac	ccctccccc	tcctatggcc	accagccaca	180
gacagggtct	ggggagtctt	caggagcctc	gggggacaag	gaccacctgt	acagcacggt	240
atgcaagcct	cggtcccca	agcctgcagc	cccggcggcc	cctccattct	cctcttccag	300
cgggtctctg	ggtaccgggc	tctgtgagct	agatcggttg	cttcaggaac	ttaatgccac	360
tcagttcaac	atcacagatg	aaatcatgtc	tcagttccca	tctagcaagg	tggttccagg	420
agagcagaag	gaggaccagt	ctgaagataa	gaaaagaccc	agcctccctt	ccagcccgct	480
tcctggcctc	ccaaaggctt	ctgccacctc	agccactctg	gagctggata	gactgatggc	540
ctcactctct	gacttccgcg	ttcaaaaacca	tcttccagcc	tctggggcaa	ctcagccacc	600
ggtggtgagc	tccacaaatg	agggtctccc	atccccacca	gagccgactg	gcaagggcag	660
cctagacacc	atgctggggc	tgtgtcagtc	cgacctcagc	cgccgggggtg	ttccccacca	720
ggccaaaggc	ctctgtggct	cctgcaataa	acctattgct	gggcaagtgg	tgacggctct	780
gggccgcgc	tggcaccccg	agcacttcgt	ttgcggaggc	tgttccaccg	ccctggggagg	840
cagcagcttc	ttcgagaagg	atggagcccc	cttctgcccc	gagtgtact	ttgagcgctt	900
ctcgccaaga	tgtgtctctt	gcaaccagcc	catccgacac	aagatggtga	ccgccttggg	960
cctcactgg	caccagagc	atttctgtcg	cgtcagttgc	ggggagcctt	tcggagatga	1020
gggtttccac	gagcgcgagg	gcccgcctta	ctgccgcggg	gacttcctgc	agctgttcgc	1080
cccgcgctgc	cagggtgcc	agggccccat	cctggataac	tacatctcgg	cgctcagcgc	1140
gctctggcac	ccggactgtt	tgtctgcag	ggaatgcttc	gcgcccttct	cgggaggcag	1200
ctttttcgag	cacgagggcc	gcccgttgtg	cgagaaccac	ttccacgcac	gacgcggctc	1260
gctgtgcgcc	acgtgtggcc	tccctgtgac	cggccgctgc	gtgtcggccc	tggttcgcgc	1320
cttccacccg	gaccacttca	catgcacctt	ctgcctgcgc	ccgctacca	aggggtcctt	1380
ccaggagcgc	gccggcaagc	cctactgcc	gccctgcttc	ctgaagctct	tcggctgaca	1440
gcccgtctcg	ctgcacctct	cccccgagg	ccgcgccttc	ccgaaaaagc	cgggtcctcc	1500
agaccccgag	gccttgctct	cagagcggga	ggccccaccc	actggagagc	cccgcacctt	1560
aggtactatg	agtcctcagg	ggtcaagttc	agaaacggcc	cagccagacc	taaaccacac	1620
cgcccacaaa	gtgattcgca	cacagacaag	aactcccgtg	cgggcctcca	ctctattccc	1680
acccttgagg	gagccccctt	actgggggag	ggtccttgca	attccagcga	atcggaggcc	1740
aggccaggac	gtccttgctc	cctgcacctt	cactgttctg	tgcacttttt	ctacctacat	1800
aaacacacgc	attccacctc	aaaaaa				1826

(i) SEQUENCE CHARACTERISTIC:

- (ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) ANTI-SENSE: NO

(A) ORGANISM: HUMAN
(C) ORGAN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

gatgaagtag	atgactttga	ggacttcac	ttcagccact	tctttggaga	caaagcactg	60
aagaagaggt	caggaagaa	ggacaagcac	tcacagagcc	caagagctgc	ggggcccagg	120
gaggggcaca	gcatagggg	ctgacaccct	gccccacagg	gaatggcctt	ggcctggccc	180
agcccaagat	cccagcgta	tctaactcct	ggagggtgga	ctctgtcctg	gcttgtttg	240
tgtcctcaga	tatctttcac	acagtagagc	aaaatcacca	gccctgcact	gatgtcactt	300
tatgtagaaa	aaggccttag	ctggacctgc	gttgccgtct	atgcaaatgc	atgcaaatac	360
tccaggccct	gggagtggg	cttgtgtttt	gtcactgtga	agggggagat	gggagaggag	420
cctgttttg	ggtggggtct	ggggaaggca	atctgattct	gaagctaaag	agctttcatc	480
ctcttgagt	tatgtcccca	tagtgggccc	cttgaccac	atgtgaccg	gtgccttg	540
atttgactag	agttgctggc	tcgaggccca	gcacgaggac	ttaccctggg	gttttgtag	600
gtttggaagc	agctgtccct	agggggtgaa	gtcccccccc	tttttttttt	tttaccctg	660
cttctccac	ggcttcacct	ccctatgtga	actgtagact	cagatcccaa	taaagtgtg	720
ttgcagctat	gatgctaggt	ggtttctaag	cacaggggac	acccacacc	ccctgcctga	780
atggatgggt	ccatcccagg	cactgggtact	tgcccccttg	ttctgtatcc	ccctttgccc	840
ttgccttgcc	cttccaacaa	accctaggcc	cttgagaagc	tgataactct	ccttttgctc	900
acagctgct	tggccccacc	cctgggagat	gtagcaaatt	gagtgtgggt	tttgagctct	960
gagcctcagg	ctcaaatcca	ggccaagtga	tcttgggcaa	gttaatctct	gggaactttg	1020
ggtttcttat	ctcaaaaaa	ggcgatggaa	gggctgggga	agtgattaaa	taaaagcaac	1080
gcaagaaaaa	aaaaaaaaa	aaaaaaaaa	aaaa			1114

(2) INFORMATION ON SEQ ID NO. 56:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1644 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

```

ctcgagccgt gcaagtggaa taacacgggc tgccaggccc tgcccagcca agaacgaagg 60
ccccagcaag gccttcgtga actgtgacga gaacagccgg cttgtctccc tgaccctgaa 120
cctggtgacc agggctgatg agggctggta ctggtgtgga gtgaagcagg gccacttcta 180
tggagagact gcagccgtct atgtggcagt tgaagagagg aaggcagcgg ggtcccgcga 240
tgtcagccta gcgaaggcag acgtgctccc tgatgagaag gtgctagact ctggttttcg 300
ggagattgag aacaaagcca ttcaggatcc caggcttttt gcagaggaaa aggcggtggc 360
agatacaaga gatcaagccg atgggagcag agcatctgtg gattccggca gctctgagga 420
acaaggtgga agctccagag cgctgggtct caccctgggtg cccctggggc tgggtgctggc 480
agtgggagcc gtggctgtgg ggggtggccag agcccggcac aggaagaacg tgcaccgagt 540
ttcaatcaga agctacagga cagacattag catgtcagac ttcgagaact ccagggaatt 600
tggagccaat gacaacatgg gagcctcttc gatcactcag gagacatccc tcggaggaaa 660
agaagagttt gttgccacca ctgagagcac cacagagacc aaagaaccca agaaggcaaa 720
aaggtcatcc aaggaggaag ccgagatggc ctacaaagac ttcctgctcc agtccagcac 780
cgtggccgcc gagggcccagg acggcccccga ggaagcctag acggtgtcgc cgctgctcc 840
ctgcacccat gacaatcacc ttcagaatca tgtcgatcct ggggccctca gctcctgggg 900
acccactccc ctgctctaac acctgcctag gtttttccta ctgtcctcag aggcgtgctg 960
gtcccccctc cagtgcacatc aaagcctggc ctaattgttc ctattgggga tgagggtggc 1020
atgaggaggt cccacttgca acttctttct gttgagagaa cctcaggtac ggagaagaat 1080
agaggtcctc atgggtccct tgaaggaaga gggaccaggg tgggagagct gattgcagaal 1140
aggagagacg tgcagcggcc ctctgcaccc ttatcatggg atgtcaacag aatttttccc 1200
tccactccat cctccctccc cgtccttccc ctcttcttct ttccttccat caaaagatgt 1260
atattgaattc atactagaat tcaggtgctt tgctagatgc tgtgacaggt atgccaccaa 1320
cactgctcac agcctttctg aggacaccag tgaaagaagc cacagctctt cttggcgtat 1380
ttatactcac tgagtcttaa cttttcacca ggggtgctca cctctgcccc tattgggaga 1440
ggctataaaa tgtctcgagt cctaaggcct tatgggtcat gtatgatgag catacacaca 1500
ggtaattata aacccacatt cttaccattt cacacataag aaaattgagg tttggaagag 1560
tgaagcgttt ttctttttct tttttttttt tgagacggag gtcttcactg tcgcccaggc 1620
tggagtgcag tggcgcaatc tcgg                                     1644

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(2) INFORMATION ON SEQ ID NO. 57:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2184 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

tgcagtggc	agagtgcct	ggtataagg	agagggcatc	accttgcccc	ctgtgctgac	60
tcctgccc	gtgcgaggg	agtccatccc	gatccggctc	ttcctggccg	ggtatgagct	120
cacgcccacc	atgcgggaca	tcaacaagaa	gttctctgtg	cgctattacc	tcaacctggt	180
gctgatatag	gaggaggagc	ggcgctactt	caagcagcag	gaagtgggtg	tgtggcgga	240
gggtgacatc	gtacggaaga	gcatgtccca	ccaggcggcc	atgcctcac	agcgctttga	300
gggcaccacc	tccttgggtg	aggtgcgga	ccccagccag	ctgtctgaca	acaactgcag	360
gcagtagggc	cccagggccg	agaagatgct	gggcacccac	ccagcacccc	catctaccaa	420
caccagcggc	tggggggcgg	ggcggaacct	gtgaggetca	gttgaccctg	tacttgcaac	480
ctgaaaacaa	atcatgtttt	tgacttaaat	tcttttctct	ggagaaccca	aggggcttgg	540
ggtgggaagc	agtctctcct	tgggattctg	cggccgatgt	gggatagaag	aggtagcatc	600
ctggaagcca	gcctctctgg	ggaacatgag	cccccttcct	cggggggctg	ccttgccgtct	660
tagaggagg	agagcagaga	gcacgcaccc	ttggctcctg	gctctctgag	cttccctgata	720
caggatctga	gcatgtccct	gggattctga	gctgccaaca	gggccctggg	tagtcacatc	780
ttgtactccc	ctttgctgtc	ccggaggtag	tggcaggagt	tgggccagcc	cccactaagt	840
ggcaggggaa	gactcacgat	tgggaagcta	cctctttggg	aatcttggat	gtggtgatct	900
caagttccca	caggccacct	ccttctggcc	actcactgct	gggaccag	cacctccctt	960
ctccatcctc	tctggattgt	cagtaatgtc	ctggaacaga	agcctgtagg	atggccttgg	1020
gcacggagaa	gccctgggg	cagtgtcgtg	cacggatggc	ggcagtgttg	aaccagag	1080
gctgaacccg	gcccaccacg	gaagatgagt	gcatggcaac	cgcctgcctt	cacgtcgctc	1140
cacttggtaa	ccccaaggtc	tgggctgttc	taggtattgc	ttcacgtgcc	ccagcaagcc	1200
cttaacaaga	gggcctggtt	ccctgaagaa	ccaatcccag	gaaggggcct	tgatccctcc	1260
gccttgctga	gagtgaacct	tcgtctctcc	tcaccctcca	tttcatttct	gggaattggg	1320
gcttagtttc	gaacctttgg	caaggctggt	cttactaatg	cccaagcccc	tttaccctcc	1380
tccttatagg	ttacacagg	gagaccagg	cctcggcaga	agactgctgc	cacacttccg	1440
aatcattctg	cttgccaaat	aggtcatctt	caccagtga	ctgaccaca	tttaggacca	1500
ttggtatcgt	gtgtttaaaa	aacacatata	aaaaaactct	tgtgaatatt	cttgttatgc	1560
tagagaggaa	ggtacttctc	cctctacggc	tctgcgctgg	ggcctatgg	agtaaagttg	1620
tttactgtcc	tttttctgct	tcccctggaa	atgacaggca	ttactctccc	attggcctcc	1680
cttcccttta	tagaaagacc	aagcaggccc	cactggccaa	gaggtacggt	atttggcagt	1740
ctgagttctc	agtaatttgg	aaagttaagg	agttggttcc	tgtgtcacct	ttcagttagt	1800
gtgggaaagg	aagacttctg	ttttcctgag	atcagtgcag	tctcaggcct	ttggcagggc	1860
tcattgatca	gagctgagac	tggagggaga	ggcatttcgg	gtagcctagg	agggcgactg	1920
gcggcagcag	aaccgaggaa	ggcaagggtg	tttccccac	gctgtgtcct	gtgttcaggt	1980
gcgacacaca	atcctcatgg	gaacaggatc	acccatgcgc	tgcccttgat	gatcaagggt	2040
ggggcttaag	tggataagg	aggcaagttc	tgggttcctt	gccttttcag	agcatgaggt	2100
caggctctgt	atccctcctt	ttcctagctg	atattctaac	tagaagcatt	tgtcaagttc	2160
cctgtgtggc	ccttcccccc	agag				2184

(2) INFORMATION ON SEQ ID NO. 58:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1510 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

```

agcctgggaa acacagtagg gctccacctc tacaaaaaac acaaaaatta gccaggcatg 60
tggcgtcata gtagaattaa tcaaaagcaa gaaaatggct ggaggagctg tcttgttggc 120
aggacctcct ggaactggca agacagctct ggctctggct attgctcagg agctgggtag 180
taagggtcccc ttctgccccaa tgggtggggag tgaagtttac tcaactgaga tcaagaagac 240
agaggtgctg atggagaact tccgcagggc cattgggctg cgaataaagg agaccaagga 300
agtttatgaa ggtgaagtca cagagctaac tccgtgtgag acagagaatc ccatgggagg 360
atatggcaaa accattagcc atgtgatcat aggactcaaa acagccaaag gaaccaaaca 420
gttgaaactg gacccagca tttttgaaag tttgcagaaa gagcgagtag aagctggaga 480
tgtgatttac attgaagcca acagtggggc cgtgaagagg cagggcaggt gtgataccta 540
tgccacagaa ttcgaccttg aagctgaaga gtatgtcccc ttgccaaaag gggatgtgca 600
caaaaagaaa gaaatcatcc aagatgtgac cttgcatgac ttggatgtgg ctaatgcgcg 660
gccccagggg ggacaagata tctgtccat gatgggccag ctaatgaagc caaagaagac 720
agaaatcaca gacaaacttc gaggggagat taataagggt gtgaacaagt acatcgacca 780
gggcattgct gagctgggtc cgggtgtgct gtttgttgat gaggtccaca tgctggacat 840
tgagtgtctc acctacctgc accgcgccct ggagtcttct atcgctccca tcgtcatctt 900
tgcattccaa cgaggcaact gtgtcatcag aggactgag gacatcacat cccctcacgg 960
catccctctt gaccttctgg accgagtgat gataatccgg accatgctgt atactccaca 1020
ggaaatgaaa cagatcatta aaatccgtgc ccagacggaa ggaatcaaca tcagtgagga 1080
ggcactgaac cacctggggg agattggcac caagaccaca ctgaggtact cagtgcagct 1140
gctgaccccg gccaaacttg ttgctaaaaa caacgggaag gacagcattg agaaagagca 1200
tgtcgaagag atcagtgaac ttttctatga tgccaagtcc tccgcaaaa tcctgggctt 1260
gaccaggcag ggataagtta cattgaagtt gagatggctt gagggttttt cagcagctaa 1320
gagacttccc caggtgtgcc tggcctgggg tccagcctgt gggcgctttg ccctgggggt 1380
tgggggctgc ccttccccat tcaggcgttg ggttgccagc ttgttcaatt tcagttgttg 1440
gaaagcgttt tttttttgaa gttagtctta agtgtttccc cttgggtttg ttttggaaag 1500
aacccttctc
1510

```

(2) INFORMATION ON SEQ ID NO. 59:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1188 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

```

gagaactcac accatatgtg tcctgttcca gtgcgcgggt ctgtggagag ccgggtgcga 60
gcggcggcag cacgagggga aaagagctga gcggagacca aagtcagccg ggagacagtg 120
ggtctgtgag agaccgaata gaggggctgg ggccacgagc gccattgaca agcaatgggg 180
aagaaacaga aaaacaagag cgaagacagc accaaggatg acattgatct tgatgccttg 240
gctgcagaaa tagaaggagc tgggtgctgcc aaagaacagg agcctcaaaa gtcaaaaggg 300
aaaaagaaaa aagagaaaaa aaagcaggac tttgatgaag atgatatcct gaaagaactg 360
gaagaattgt ctttggaagc tcaaggcatc aaagctgaca gagaaaactgt tgcagtgaag 420
ccaacagaaa acaatgaaga ggaattcacc tcaaaagata aaaaaagaa aggacagaag 480
ggcaaaaaaac agagttttga tgataatgat agcgaagaat tggaagataa agattcaaaa 540
tcaaaaaaga ctgcaaaacc gaaagtggaa atgtactctg ggagtttaac aaacttccta 600
aaaaagctaa agggaaaagc caaaaatcaa ataagaagtg ggatgggtca gaggaggatg 660
aggataacag taaaaaaatt aaagagcggt caagaataaa ttcttctggt gaaagtgggt 720
atgaatcaga tgaatttttg caatctagaa aaggacagaa aaaaaatcag aaaaacaagc 780
caggtcctaa catagaaagt gggaatgaag atgatgacgc ctcttcaaa attaagacag 840
tggcccaaaa gaagcgagaa aagaaggagc gcgagagaaa aaagcgagat gaagaaaaag 900
cgaaactgcg gaagctgaaa gaaaaagaag agttagaaac aggtaaaaag gatcagagta 960
aacaaaagga atctcaaagg aaatttgaag aagaaaactgt aaaatccaaa gtgactgttg 1020
atactggagt aattcctgcc tctgaagaga aagcagagac tcccacagct gcagaagatg 1080
acaatgaagg agacaaaaag aacgaaagat aagaagaaaa agaaaggagg acaagggagg 1140
aaaagagaac agagaaggaa agaagggcct ggcaaaagcc actgtttc 1188

```


(2) INFORMATION ON SEQ ID NO. 60:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2208 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

gcaggacggc tctgggccct tcctggctga cttcaacggc ttctcccacc tggagctgag 60
 aggcctgcac acctttgcac gggacctggg ggagaagatg gcgctggagg tcgtgttcct 120
 ggcacgaggc cccagcggcc tcctgctcta caacgggcag aagacggacg gcaaggggga 180
 cttcgtgtcg ctggcactgc gggaccgccc cctggagttc cgctacgacc tgggcaaggg 240
 ggcagcggtc atcaggagca gggagccagt caccctggga gcctggacca gggctctact 300
 ggagcgaaac ggccgcaagg gtgccctgcg tgtgggcgac ggcccccggtg tgttggggga 360
 gtccccggtt ccgcaacacc tcctcaacct gaaggagccg ctctacgtag ggggcgctcc 420
 cgacttcagc aagctggccc gtgctgctgc cgtgtcctct ggcttcgacg gtgccatcca 480
 gctgggtctcc ctggagggcc gccagctgct gaccccgag cagctgctgc ggaggtgga 540
 cgtcacgtcc tttgcaggtc accoctgcac ccgggcctca ggccaccctt gcctcaatgg 600
 ggccctcctgc gtcccgaggg aggtgccta tgtgtgcctg tgtccggggg gattctcagg 660
 accgcaactgc gagaaggggc tgggtggaga gtcagcgggg gacgtggata ccttggcctt 720
 tgacggggcg acctttgtcg agtacctcaa cgctgtgacc gagagcgaga aggcactgca 780
 gagcaaccac tttgaactga gcctgcgcac tgaggccacg caggggctgg tgctctggag 840
 tggcaaggcc acggagcggg cagactatgt ggcactggcc attgtggacg ggcacctgca 900
 actgagctac aacctgggct cccagcccgt ggtgctgctg tccaccgtgc ccgtcaacac 960
 caaccgctgg ttgcgggtcg tggcacatag ggagcagagg gaaggttccc tgcaggtggg 1020
 caatgaggcc cctgtgaccg gctcctcccc gctgggcgcc acgcagctgg aactgatgg 1080
 agccctgtgg cttggggggc tgccggagct gccctggggc ccagcactgc ccaaggccta 1140
 cggcacaggc tttgtgggct gcttgcggga tgtggtggtg ggccggcacc cgctgcacct 1200
 gctggaggac gccgtcacca agccagagct gcggccctgc cccaccccat gagctggcac 1260
 cagagccccg cgcccgctgt aattattttc tatttttgta aacttgctgc tttttgat 1320
 gattttcttg cctgagtgtt ggccggaggg actgctggcc cggcctccct tccgtccagg 1380
 cagccgtgct gcagacagac ctagtgtgga gggatggaca ggcgaggtgg cagcgtggag 1440
 ggctcggcgt ggatggcagc ctcaggacac acaccctgc ctcaagggtg tgagcccccg 1500
 ccttgcaactg cgccctgccc acggtgtccc cgccgggaag cagccccggc tcctgaatca 1560
 ccctcgctcc gtcaggcggg actcgtgtcc cagagaggaa ggggctgctg aggtctgatg 1620
 gggcccttcc tccgggtgac cccacagggc ctttccaagc ccctatttga gctgtcctt 1680
 cctgtgtgtg ctctggacc tgccctggcc tcctgcgcca atactgtgac ttccaaaca 1740
 tgttactgct gggcacagct ctgcgttgct cccgtgctgc ctgcgccagc ccaggctgct 1800
 gaggagcaga ggccagacca gggccgatct ggggtgctctg accctcagct ggccctgccc 1860
 agccaccctg gacatgaccg tatccctctg ccacacccca ggccctgcga ggggctatcg 1920
 agaggagctc actgtgggat ggggttgacc tctgccgcct gcctgggtat ctgggcctgg 1980
 ccatggctgt gttcttcatg tgttgatttt atttgacccc tggagtggtg ggtctcatct 2040
 ttcccatctc gcctgagagc ggctgagggc tgcctcactg caaaatcctc cccacaaaag 2100
 cggtcagtga aaagtcggtc ctttgcctta aaaaatgacc aaggggcca gcaagttttg 2160
 tgaacaaagg gtgaaggggg aagttcgaaa aggttggaa ggaatttt 2208

(2) INFORMATION ON SEQ ID NO. 61:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 283 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

```

gaaaagggggg aggggggagtg acaatctttg cttggggcct atgacttctc cagccccaag 60
gggagatgcc accgggaaat cccccaatgt ccactagggg gcaggaggcc accgttcttc120
gtactccgga gaacctggct ggagagctct ttcttgttca cccttcctc cagctgtatc180
tctgccctgc agataacgtg aaggactgga gcaaggctcgt cctggcctat gagcctgtgt240
gggccattgg tactggcaag actgcaacac cccaacaggg aac 283

```

(2) INFORMATION ON SEQ ID NO. 62:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 184 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

```

aacggaggat gcctaggctt ctggaggcga agaaggacgc ggcaagctgc gaaaagtcac 60
gggtatctgc aagcatgaaa tgatccgtga atatccgaat ggggcaaccc gtgcaggtga120
agcctgcaca cctgaataaa tcaggggcag acgcagggaa ctgaaacatc ttagtacctg180
cagg

```

184

(2) INFORMATION ON SEQ ID NO. 63:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1780 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

```

tcccccccg gggcaacccc cccatcgggc ccccaaagcg ctgggggttac agccttaagc 60
caccaagccc cggcgcgacct tcttctatct ttccattctc ctttccaaag ccatggccat 120
gcgctcctgt gtacaggtgc ataaacacat cagtgtgcc a tccctcacat gcatgtcgtt 180
ccccaccctt ccttcccagg gcttctcttg gctccagcgt tccctctggga ccctctgcag 240
atacagcctg tgctggaccc ccagccaggg tgaggggtca ttctgctctg tcttcccac 300
tgectcagtt tccccaaaaa gctgctttca cgtccttcta gtagggggcc tcccatgggg 360
gcaaggatcc cttttaggat tcaatctttc ctctttgggc agttttggct ttgagtcctc 420
cagggatcag ggtgagaatg aagaagagct cagtgagcgg aatgacagca gctgggtggg 480
tggtgtgggg agaggctgag gggaaggcag ctctaagact gggagtggag ttcctggagg 540
tgtggggagg ggggcgtggt ttcaatttag aaaaatctca gccagctcga gccagagagag 600
aatgcgaaag aggaagttcg gaaggagcga ggaatggggg ggggtggcagc gggggccgct 660
cagttgctgt cgctcttgct caccagcacg gcgtccgact cctcgggtgat ctccagcagc 720
gcgtgcacgt cggggctgct cccgcgcgcg aggtcgcgcg cctccccccg ctccgcccac 780
ctccaccatc tcgggtggct tgagcacttc cacctggccc tcgcggatct tcttgacgtg 840
gaaggtgaag ggtggcacct tgtagaccgc ggtcttgagg cgcgcgtaca ccacgtggtc 900
gggcaccagg cgcgtgccc aattgtccc cgacgtcttc agtttctcgc gccgtcggc 960
caggttttcc ttggtcttga ggcgcgtctt ctccaggttc tcgcgggtac gcaccttggg 1020
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cgcttgatac gctctgcgcg ggactcctca ataacctcct caacctccac cgcctcgtcc 1200
gacgaaagct ccagcgcgcg tcgctcctcc tcgggcgcgt cgccctcgcc cagctcctcg 1260
ccctccttct ctggcagcgc ctccgactct ttcagcgatt tgctgatgct cagtttggcc 1320
ggcagcttca cttcatcctg gtagatcatg actttaaggt tgcggcgcgc cagcagctcg 1380
gcctcgttga cctccagctt cttgatctgc cccgcctggc gctccaggct gccgcgcacg 1440
gtcttcacgt tgacgctgac cttgcgcacc ttctccagca gcttgctcac cgtattgctc 1500
gtggtggcgt gcgccttgcc cagcttgctc agctcgcctt ggatgctctg cactgcgccl 1560
tccatctccg cctgccgctc ctccagctgt gcttgagtca gctggatctg gtctacggcc 1620
ccgatgattt tgtccaggag gctcagcacc agcacgcctg tcacctggtc cgacttgatc 1680
agctcttctg agccggcccc cgacggctcc tccgctgctt gagccccagc ggaggaagct 1740
ccggggcctc ggcgatcggg gtaccggggc aagcggccgc 1780

```

(2) INFORMATION ON SEQ ID NO. 64:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1652 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

```

ctcgagcggc tcgagccgat tcggctcgag cggctcgaga agaagatatg ctagtctgta 60
tttttgctgt gctattgagg atcaggacaa tgaactaatt accctggaaa taattcatcg 120
ttatgtggaa ttacttgaca agtatttcgg cagtgtctgt gaactagata tcatctttaa 180
ttttgagaag gcttatttta ttttggatga gtttcttttg ggaggggaag ttcaggaaac 240
atccaagaaa aatgtcctta aagcaattga gcaggctgat ctactgcagg aggaagctga 300
aaccacacgt agtggttctt gaagaaattg gactgcata actctcctcc cttgttgatg 360
acttcttggtg gcatttcaca cactgtagat ggtcactccc ttcattgtcca tgttagctca 420
tggtgtaaga tgatgtcttg tcagtattac tgttttgcta agccgcttca ttcattgccta 480
cacaattttt ttttaaaagg gaactttagt taattaagtg ataagggact taaatatgaa 540
ttagaatggt gcagaaagag ataccttttc tggatatttt aaagttttaa ggtcagtttc 600
tcttaatctg attatgtgca catatgaaaa tggcacatca tatacatgta aaatcaggca 660
gtatacattt attaattact gtatttgaca aaggaaaactc ttaaattata atgtgaaacc 720
tggttttatg aaaccaaaga ctagtgcagc atttcagcat atgtaaaaag aaaaaaaaaa 780
gggaattgac atgtcacata tcaaatgaat ggaaactttg ttgaaacttt aaaaagcaaa 840
tttactccaa agacttgat tggaattac ataccttttt tttttttttt aaaggactac 900
agattatttt taatgactaa attggagtga tacttcttac actaaaaatt atttcttagg 960
cattctgaat ctgggatgag aaacaggatt gtttcacaat agtaagcaca taatttttaa1020
ggccaaggca catttgactc ctgagatgaa ttttttggtg tcataatcaa atacttaggt1080
gtttttgatg ccccaaaata aagtgagaat ggtaatttgc caggaattct tcataacagt1140
atcttacaaa aaacgtgttg ctctcttcac agtattatgt gtaaagtcac tgtttaaagc1200
acgaatgttc cctctggggg acttggttaa gctaaattta ttttgcttcc ctccacttag1260
aagtgtcgca cactttacag cagcttcctt tctttccatg gcaactgccta gttaacagaal320
gtcttataaa aatttaaaaa gacacatttc ttacaaaaaa gagttgaatg aggtaaaatg1380
gcattagatg gctctatatt ttttaaagct atgtaattgt tcagcgtcac ttttctaagt1440
acttatcat atctaaacat gtcttcatgg tttatatttt cacttatata tgctgggctg1500
gattaagctt tgttgtgatt gtgaccaaca ttcaggccac gtgagcactg tcttatcaca1560
tcgccaatga gttgtaataa acgttcaacg tacaaaaaaa aaaaaggcg cagcttcctt1620
ggggggaatt actggaagcg ggttaagcg ga
1652

```

(2) INFORMATION ON SEQ ID NO. 65:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1085 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

```

gctccctggc ctccctctca gacagcttgg ggggtgtctgt catggccacc gaccaggact 60
cctactccac cagcagcacg gaggaggagc tggagcagtt cagcagcccc agcgtgaaga 120
agaagccctc catgatacctg ggcaaggctc ggcaccggct gagctttgcc agtttcagca 180
gcatgttcca cgctttcctc tccaacaacc gcaagctgta caagaagggtg gtggagctgg 240
cgcaggacaa gggctcgtac tttggcagcc tgggtgcagga ctacaagggtg tacagcctgg 300
agatgatggc gcgccagacc tccagcacgg agatgctgca ggagattcgc accatgatga 360
cccagctcaa gagctacctg ctgcagagca ccgagctcaa ggccctgggtg gaccccgccc 420
tgcactccga ggaggagctc gaagcaattg tagagtctgc cttgtacaaa tgtgtcctga 480
agccctgaa ggaagccatc aactcatgcc tgcatacagat ccacagcaag gatggttcgc 540
tgcagcagct caaggagAAC cagttagtga tcctggccac caccaccact gacctagggtg 600
tgaccaccag cgtgccggag gtgcccatga tggagaagat cctgcagaag ttcaccagca 660
tgcacaaggc ctactcacct gagaagaaga tctccatcct gctcaagacc tgcaaactca 720
tctacgactc catggccctc ggcaaccagc ggaagcccta tggggcggat gacttcctgc 780
ctgtgctcat gtatgtgctg gccgcagca acctcacgga gatgcttctc aatgtggagt 840
acatgatgga gctcatggac cccgccctgc agctggggga gggttcctac tatctgacca 900
ccacctacgg ggccctggag cacatcaaga gctacgacaa gatcacggtg acccggcagc 960
tgagtgtgga ggtgcaggac tccatccacc gctgggagcg ccggcgctact ctcaacaagg1020
cccgggcctc ccgctcctcc gtacagccac ttcattctgcg tgtcgtacct ggagcccag1080
cagca

```

(2) INFORMATION ON SEQ ID NO. 66:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1393 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

```

gggcagggga gggagttgac gggctgacac aggaaactcc cctgaaacct gtttctcagc 60
ttcccggccc agctggggca cccactggaa ggagaggcca ggcggaagac cctgggtccg 120
tcatggcctc tgccctgagg ccaccccgtg tcccgaagcc taagggtgtc ctgccttcac 180
actactatga gagctttcta gagaagaagg ggcctgtga ccgggattac aagaagttct 240
gggcaggcct gcagggtctc accatttatt tctacaatag caatcgggac ttccagcacg 300
tgagagaagct caacttgga gcatttgaga aactcacaga tgagattccc tggggaagct 360
cacgtgacct tggcaccac ttcagcctga ttctccgaa tcaggagatc aagttcaagg 420
tagagacctt ggagtgtcgg gaaatgtgga aaggcttcat cttaacggtg gtggagctcc 480
gtgtcccga cgaacttgacc ctgcttcctg ggcacctata catgatgtct gaagtcttgg 540
ccaaagagga ggcgcgccgt gcactggaga caccctcgtg cttcctgaag gtgagccggc 600
tggaagcaca actgctcctg gagcgtacc ccgagtgcgg gaacctgctg ctgcggccca 660
gcggggacgg cgcgcacgg gtgcgtcacc acgcggcaga tgcacaacgg gacgcacgtg 720
gtccggcatt acaaggtgaa gcgggagggg cccaagtac gtgatcgatg tggaacagcc 780
gttctcttgc acctccctgg acgccgtggt caactatttc gtgtcgcata ccaaaaaggc 840
gctggtgcca ttctgttag acgaggacta cgagaaggtg ctaggctacg tgggaagccga 900
taaggagaat ggcgagaatg tgtgggtggc gccctccgct ccgggcccag gtcctgcacc 960
ctgcacaggt ggccccaaag cgctgtcacc tgcgtctagc caggacaagc tgccccact1020
gccccacta ccgaaccagg aagagaacta cgtgaccct attggagatg gccagctgt1080
tgactatgag aaccaagatg tggcttcctc tagttggcca gtcacacctga agccaaagaal1140
gttgccaaag cctcctgcca agcttccaaa gccaccggt ggaccaagc cagagcccaal1200
agtctttaat ggtggcttgg gcagggaagc tgccagttca gtttcagccc agcctcttct1260
ttccccacag gcggggtgg gcagacatgg acggcagagt tacagaagaa gctgggagaal1320
gaggcggggc actggtagca tggtttcgga cacaccagg accagcgggt tagttccagg1380
gcggggccagg tgg

```

1393

(2) INFORMATION ON SEQ ID NO. 67:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1248 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

```

ggcacgagga agttaagatc atacatgcgg atgtgctggt aacctgcaag aagcaatcat 60
gctgcgggtcc ggtgtgacct cccaaggcat tcacctggg agtccctggt gctgcacccc 120
aaccagaggca gagctcatcg tgggtgacca gagcggggct atccacatct gggacttgaa 180
aacagaccac aacgagcagc tgatccctga gcccgaggtc tccatcacgt ccgcccacat 240
cgatcccgac gccagctaca tggcagctgt caatagcacc ggaaactgct atgtctggaa 300
tctgacgggg ggcattggtg acgaggtgac ccagctcacc cccaagacta agatccctgc 360
ccacacgcgc tacgccctgc agtgtcgctt cagccccgac tccacgctcc tcgccacctg 420
ctcggtgat cagacgtgca agatctggag gacgtccaac ttctccctga tgacggagct 480

gagcatcaag agcggcaacc ccggggagtc ctcccgcggc tggatgtggg gctgcgcctt 540
ctcgggggac tcccagtaca tcgtcactgc ttctcggac aacctggccc ggctctggtg 600
tgtggagact ggagagatca agagagagta tggcgccac cagaaggctg ttgtctgcct 660
ggccttcaat gacagtgtgc tgggctagcc tgtgacctc cgggactgcc tgggtgcagg 720
ggtggcagct ggagggaccc atgcagcacc caggtcagag cagacctcc cctgccggcc 780
tgcgccactg gacctgatgg cccctgtgg cgccttgacc tgcctggcca ggctgcctg 840
ggactctcag cccccagttg cttatccaga tgtgacagag ctgcaccaa gccaggctgc 900
acactcctgg actgggctag cctgcactgc ctgggaaagt cggccgaggg cccaaagctg 960
ctgaggggtc tgaggctggt gccaccccc aagctagtgt gttctctgcc cctccctgcc 1020
cgcgtttcag ggcctcggtc catagagaac accaccacca tggccagggt gaagggttta 1080
ttagtcctg ccagcagctg tcctccctgg tgcaggtggc ctggccagcc cactggattg 1140
gggacgggcc aggtcgggcc aggtcggggg ctcatctggt gaggtataa aagcagaccg 1200
acacgcagat gttgctcggt aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1248

```

(2) INFORMATION ON SEQ ID NO. 68:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1099 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

```

ctcgtgcaat ttctgggcagg gagtgtcaag cctgttgtct taacatTTTtg tataaaaaag 60
aacaacagaa attatctgtc atttgagaag tggcttgaca atcatttgag ctttgaaagc 120
agtcactgtg gtgtaatatg aatgctgtcc tagtggcat agtaccaagg gcacgtgtct 180
ccccttggtg taactgattt ccttttttagt cctctactgc taaataagtt aattttgcat 240
tttgagaaa gaaacattga ttgctaaatc tttttgctgc tgtgttttg tgttttcatg 300
tttacttggt ttatattgat ctgttttaag tatgagaggc ttatagtgcc ctccattgta 360
aatccatagt catcttttta agcttattgt gttaaagaaa gtagctatgt gttaaacaga 420
ggtgatggca gcccttccct agcacactgg tggagagagc cccttaagaa cctgacccca 480
gtgaatgaag ctgatgcaca gggagcacca aaggaccttc gttaagtgat aattgtcctg 540
gcctctcagc catgaccgtt atgaggaaat atccccatt cgaacttaac agatgcctcc 600
tctccaaaga gaattaaaat cgtagcttgt acagatcaag agaataact gggcagaatg 660
aagtatgttt gtttattttt ctttaaaaaa aaaggatttt ggaactctgg agagtaagaa 720
tatagtatag agtttgctc aacacatgtg agggccaaat aacctgctag ctaggcagta 780
ataaactctg ttacagaaga gaaaaagggc cgggcacagt ggcttattcc tgtaatcca 840
acactgtgga aggccgaggc aggaggatca cttgagtcca ggagtttgaa acctacctag 900
gcaacatggt gaaaccttgt ctctaccaa ataaaaatta gctgggcatg gtggcacgtg 960
cctgtggtcc cagctacttg ggaggctgag gtgggagcct gggaggtcaa ggctgcagt 1020
agccatgatc atgccactgc actccatcct gggtgacagc aagatcttgt ctcaaaaaa 1080
aaaaaaaaa aagtcgacc                                     1099

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(2) INFORMATION ON SEQ ID NO. 69:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 774 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

```

tttatggagc ctgtactatg taccagatgc agactgtgct agcggttggg gatacagtga 60
tgacttggtc tgcctctagg tggcagggag ccattttggg ttttcgaaca gaaaagtgacl20
ataatgaatg ctgagttctt aggaagatta atccaggagt agtctccagg atgtactgga180
aggagagaag ctgaaaccag ggaggctgct gtgtttgcag ttggctgccc agtgctacct240
ctgcagagac aatcaatgtc ctgaaggtag ctggtatgtc tgtgtgcaact gacacgagcc300
ttcctaccaa gccccagggg ctccatgctg gagaatgcac gtagggctag ggtgagcact360
aacttcactt caggagagca aggaacagtg tggtctctcc atttttcagt tctgtaagca420
catcaccctt ttctcctccc cttgagctgt gttctctgac agctgtttgt tggtaaagcc480
agcagccctt aaagcacgtc ccagccttgt ctctctgtg ctttccccca ccactgctgc540
tgcacgcctc atttgctggg ccactttagt ggtggaacca ttagaggctg agtgacttaa600
aggagattga gtctgtctcg accccgagag agagtgggat ggatggatgc atcgtctcat660
ttagaaagtg ttgcctctga ctctaacaca ctcttctctc tttctttacc gccctccctg720
tgtgcgtccc tgggggggagc tgggctaaac cccttccgtc cccctttctc ctcc 774

```

(2) INFORMATION ON SEQ ID NO. 70:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 426 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

```

tagctccagt ctcagctgta tcattttcta actgattttt acaataaaaa tgagagtaaa 60
aatcagttac tctttctaga cattaattag cacatttacg ttaagactct aagtagtata120
aatgtaaat tgetgtacc ctactaagtt actgtcagta aatactgtgt gcagtaaatg180
ttgagtatgg attaattgaa ggatacctct acaattattt cctttagtca aggttgtagc240
taagaattgg gcttctgaca tacattcttt ttaatctttt tegtattggg ttttatagca300
ctaaacctaa tttctaacat atttttacac ctgaaatcta cattctaata taaagggttt360
tttttataac gttcctaaaa tttcaggccc tcagcaggca gtttttgtcc cagttttctt420
caacag 426

```

(2) INFORMATION ON SEQ ID NO. 71:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1417 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

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gccaaaccttc cctcccccaa ccttgggggcc gccccagggc tcctgcgcac tgccctgttcc 60
tcctgggtgt cactggcagc cctgtccttc ctagagggac tggaacctaa ttctcctgag 120
gctgaggag ggtggagggt ctcaaggcaa cgctggcccc acgacggagt gccaggagca 180
ctaacagtac ccttagcttg ctttccctcc cctcctttt tattttcaag ttccctttta 240
tttctccttg cgtaacaacc ttcttccctt ctgcaccact gcccgtaacc ttaccgcgcc 300
cgccacctcc ttgtaccccc actcttgaaa ccacagctgt tggcagggtc ccagctcat 360
gccagcctca tctcctttct tgctagcccc caaagggcct ccaggcaaca tggggggccc 420
agtcagagag ccggcactct cagttgccct ctggttgagt tggggggcag ctctgggggc 480
cgtggcttgt gccatggctc tgctgacca acaaacagag ctgcagagcc tcaggagaga 540
ggtgagccgg ctgcagggga caggaggccc ctcccagaat ggggaagggt atccctggca 600
gagtctccc gagcagagtt ccgatgccct ggaagcctgg gagagtggg agagatccc 660
gaaaaggaga gcagtgtca ccaaaaaaca gaagaatgac tccgatgtga cagaggtgat 720
gtggcaacca gctcttaggc gtgggagagg cctacaggcc caaggatat gtgtccgaat 780
ccaggatgct ggagtttatc tgctgtatag ccaggtcctg tttcaagacg tgactttcac 840

catgggtcag gtggtgtctc gagaaggcca aggaaggcag gagactctat tccgatgtat 900
aagaagtatg ccctcccacc cggaccgggc ctacaacagc tgctatagcg cagggtgtctt 960
ccatttacac caaggggata ttctgagtgt cataattccc cgggcaaggc cgaacttaaa 1020
cctctctcca catggaacct tcctgggggt tgtgaaactg tgattgtgtt ataaaaagt 1080
gctcccagct tggaagacca ggggtgggtac atactggaga cagccaagag ctgagtatat 1140
aaaggagagg gaatgtgcag gaacagaggc gtcttcctgg gtttggctcc ccgttcctca 1200
cttttccctt ttcattccca cccctagac tttgatttta cgatatctt gcttctgttc 1260
cccatggagc tccgaattct tgcgtgtgtg tagatgaggg gcgggggacg ggcgccaggc 1320
attgttcaga cctggtcggg gccactgga agcatccaga acagcaccac catctaacgg 1380
ccgctcgagg gaagcaccgg gcggtttggg cgaagtc

```

(2) INFORMATION ON SEQ ID NO. 72:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 691 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

```

ctgccttcgc gtgcgtcggt tacgccagtt tgaaccaaag acgcccgaagg ttgaggccga 60
gttccagagc atgggggtctc gggtgtccca gccttttgag tcctatatca ctgcgcctcc120
cggtagcgcc gccgcgcccgc ccaaacctgc gccccagct acaccggag cgccgacctc180
cccagcagaa caccgcctgt tgaagacctg ctggagctgt cgcgtgcttt ctgggttggg240
gctgatgggg gcgggcgggg acgtgtactg ggtggcacgg aagcccatga agatgggata300
ccccccgagt ccatggacca ttacgcagat ggtcatcggc ctcagcattg ccacctgggg360
tatcgttgtc atggcagacc ccaaaggga ggcctaccgc gttgtttgaa agtaccacca420
gtgaatctgt cttctgtctc tgtccctttc cccgtgacac acagagcagg catggaattt480
aatgggtggt ctggacagac acttgtacat ggacagacat cactactgtg gatactacaa540
gactgaaaag aaaatcgtat gttgtcattc tctggctatg gagtgtttgt ggccttcaca600
gatttcacag gaaccaataa atccctcaga gaagtaaaaa aaaaaaaaaa aaaaaaaaaa660
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
691

```

(2) INFORMATION ON SEQ ID NO. 73:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1705 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

```

gattcggcat gaggacagag ccctttttga aaataaattg gcattggagt gttttaccct 60
ctagctgttt tacttagaat gtaacatatg ctgcctaccc acctcaaaat gtctgtactg 120
caagagggcc ctgggcctct gctttccata ttcacgtttg gccagagttg tagtcccaaa 180
gaagagcatg ggtggcagat ggtagggaat tgaactggcc tgtgcaatgg gcatggagca 240
caaggggtca cagcatgcct cctgccttac cgtggcagta cggagacagt ccagaacatg 300
gtcttcttgc caggggtgtg tgttgtctct ggtggtgctg catgtctgtg gctcaccttt 360
attcttgaaa ctgaggttta cctggatctg gctactgagg ctagagccca cagcagaatg 420
gggttgggcc tgtggccccc caaactaggg ggtgtgggtt catcacagtg ttgccttttg 480
tctcctaaag atagggatct acttttgaag ggaattgttc ctcccaaata aatttgcttt 540
accttggtcc tttcttttgt gccagtattc aagtggata gctctgagca gggtcacatt 600
tgcccaaacc tgacactgtc ttgctgcatt ctctttggc aaacatcagg gtcagaattc 660
aggatagccc ttcctagggc actggacttt ctggcatggg ggctgtgttt gcacaagtta 720
tttcatgtt acctggagag tgtccagagg ctgctctgag gctgaggtgt gttccccctt 780
gcctggttcc agctgtcaga gggataccat cctagggctc gggaatccaa ggccacgaga 840
ctccttggtt tgtggtccga gatcctgtac taaggagggt ctggccagag gaacagacca 900
gcttttgcac aatgaagcgc aagggaacaa gtggtttgcc tgggtgtccta cctgtcctga 960
acctggtcct gtgggccatt gaaaagttag atctgtgatc tctggggttt ttgtggcttt 1020
gttcaatgct tccactctag ggcaggcaga gcagtctata ctctcccaag cctgcttgac 1080
ctccaagtag agctgataca gagatctgtg aatattgtga tagaaattct ttggtattca 1140
tacatttcag ctgcaagtca gcaatttccc aggtaccatg taagctataa aacagtcatt 1200
cttaaagaca gaggatagct gtgactcatg ggatcatgag gtccatggct ggttgcaggt 1260
tccctttttc cttcctcagg ttttgtctct tctgtgttg tccccagcaa gggagagact 1320
gtgggggtgga ttggggagaac agattaggag tatagcaaat gaaccagaa tgggaacagt 1380
gggagctaac tgtgaatgag gagagtacct gctgcaggac ctggagggtca ggtgtgaatg 1440
ctgtattggc acaggggaata aatatcctgg cgtctggagc cttcacctct cctcaagtc 1500
cttcctgtga tactgccatg gcacaggatc tgagttgcag ctctgcaccc taaatcacac 1560
cctgggcatt gtctgggctg cagggtgcc aggttctgta cttgtgtcca gctgtggccc 1620
tggtatgccg aaactgggag ggggttcttg tgcccagaat gtagcctgta acgcttgggc 1680
gccttttaaa gccccctg gggcc

```

1705

(2) INFORMATION ON SEQ ID NO. 74:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1516 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

```

gtttattcctt agtagttgga actaatgtag tctgactaaa atacacatgg gtgtctgctc 60
tgtgatgttt aaacttatct gttttgtttg gttttcattt caggaagcag aagtgcgaagc 120
aaagcagcaa gcatgaacct taagcactgt gctttaagca tcctgaaaaa tgagtctcca 180
ttgcttttat aaaatagcag aattagcttt gcttcaaaaag aaataggctt aatgttgaaa 240
taatagatta gttgggtttt cacatgcaaa cattcaaaat gaatacaaaa ttaaaatttg 300
aacattatgg tgattatggg gaggagaatg ggatattaac ataaaattat attaaataag 360
agatatcgta gaaatagtgt tgttacctgc caagccatcc tgtatacacc aatgatttta 420
caaagaaaac acccttcctt ccttctgcca ttactatggc aacttaagtg tatctgcagc 480
tctacattaa aaaggagaaa gagaaataac ctgtctctca ttcctaagtt gcctcattaa 540
ttttcatgaa caagaatatg tacctttttg atgctatatt actgcgatta aaaagttctt 600
gcaggtaatg tttatgatat gttaaactgt gtaatttctt atcgtaatta taacattccc 660
attcttttgt agatgaaact tctacatatt gaaccacaga ttttctgagc ttctaaatgt 720
agcctttcat tgcacatttc agtgatcaga atagatatcc ttttacacgc acaaaagcaa 780
tagattcatt cagtggacaa gttccttggt taactacaca gctatgatgg aatgatatat 840
ccaagttcct tgcctcagtg aaatatgcat atgtatatca tgaaagtggg atgccaagta 900
agcttaaaat ggcattctct agcaaagaga ttagactttt aaataactct tataaaacag 960
gttggcgatc atttcccaag attggtttcc cttgagtttt tgctaaaaca aatcttagta 1020
gttttgcccg tttaaaacaa ctacacatcg taaatgctac tattcctaag atatcttacc 1080
tttttatttc agtttagcca tgtattgtat gagtgtatta gtctaagcag tgagaatctt 1140
ttctatgcct ctattccagc aaaaagtaga agtatcaaat aaaaagggca acttttaaaa 1200
tattaagcct gaagacttct aaaaagacaa gaaacatggc ctaaataacc aacatagatt 1260
tacatagtaa gtttcacact accttattac caaaagcaaa cacctcttac tttaaactac 1320
attatcatgt atatctattg tatgctgggc tttacttttt gccaaaatca acatataatg 1380
aagagatgcc tttgtttcat gagattcaaa cttgatgcta tgctttaaaa taaactcagt 1440
acttttagaa acataaaaaa aaaaaaaaaa aggcgacccc ccgagtagtg ggcccgcgcc 1500
cggggatttt tccggg

```

1516

(2) INFORMATION ON SEQ ID NO. 75:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1490 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

```

gaataaaggg ctggccagac ccagtggcgt cctttcccag acctttcttg gcacaaagcc 60
tttgcctgct ggcttgagg ccctgcgcc tacattctct ggacccact atgtgcctgg 120
caaagggcta gtgccttgag gaaactgagg tagctgggtt ggtccccttc caggaattca 180
gagtcctggg gcaggggcat gggaaataga cagatgtaat tctatagcct gggcctggca 240
ccctccacct ccacgcccc ccagcattgc cttacgcctc cttgccccca cgtagatgg 300
tttcttccgg ttttgcactc tggctgcccc ttggagtctc ctggggagct gtaatatctc 360
tttgagagatt cagattgagc tggcttaggt tgtggcccag gcattgggca ttttggaagc 420
ccccagggtg tttcagcttg cagccaggcc gagagagagc ccctgagtca gatccccatg 480
gttttaggcac acctagcggg aggggtggct cctggacccc accgtggttg gagagctgag 540
catgtgtgtg gctttagtgg ggtctgttag ttatgggggt ctgggcactg gagctgcagg 600
acacttgga tcccaggta gaaaggcca gatgagcaac taggaaagac ttgggggcca 660
gggcggagtg ggtcacctg acactcttgt gagggccctt ctagtgcctg ctcacaccgg 720
aatttcattc actccaagaa gccatcaggg gtaagatacc ttcctttaa cgtcactaag 780
aaagaagagg cctgccggtg acacagtaag atgccattga tctaaagatg cgtcttgatt 840
tcagaaaggt ccggaagtgg aaagcaggtt tcagggtgc tgaggtacag ggttctcctg 900
taggccccag ggatggtctc aggggtgctg agtgcgtgcg tggtaaattg atggagccca 960
ggggcgccct ctgccagtgt cctccaggca ctcaaaccta gcccttctga agccgacctc 1020
acgtgacctc acagcccctc ctgaaggcgc ctactgatg acggtgggtg gaataacagc 1080
ccccagagat gtccaggttt ggaaccccag gacgtgggaa agtgttacct tgcgtggcaa 1140
aagggacccg gcgctgtgc ttcagttcag gatttcgtgg tggggagatg accgtggatg 1200
gttgaggttg gccctgagta atcatggggg cccttataag ggaaggggag tcacgaggtg 1260
ctgcgcataga agcaaggaag cttctggctg tgaagatggc aagaaggcct ggggccaggc 1320
gatgaggttg cccctggagg agctggaaaa ggcattggat tctgccccag agcctccgtg 1380
gagaaacaaa gccgcactga caagacttca gcctggtgaa aaccattttg gactcctgac 1440
ctctagaact gtaagataat aaattggtgt ggttttcaac ctctcaaatg 1490

```


(2) INFORMATION ON SEQ ID NO. 76:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2513 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

```

ctcgagccga ttcggtttca gcagaaagtg atggaaaaag aaactgaaaa ggcattttct 60
gaaatcgaag atgctgcatt cctggcccga gagaaagcga aacaagatgc tgaatattat 120
gctgcacaca aatatgccac ctcaaacaag cacaagttga ccccggaata tctggagctc 180
aaaaagtacc aggccattgc ttctaacagt aagatctatt ttggcagcaa catccctaac 240
atgttcgtgg actcctcatg tgctttgaaa tattcagata ttaggactgg aagagaaagc 300
tcaactcccct ctaaggaggc tcttgaaccc tctggagaga acgtcatcca aaacaaagag 360
agcacagggt gatgcaagag gtggaatgt tctccatata aagatgtggc ccaaggggtt 420
aagtgggaac aatcattata cggactcttc agatttacag agaacttaca cttcatctgt 480
tccacctctc ctgcatagt cctgggtgct ccactgattg gaggatagag ccagctgtct 540
gacacacaaa tggcttttct agccacagtc ttatcaagta tcctatatgt attcctttct 600
aaactgctac tcatgaatga ggaaagtctg atgctaagat actgcctgca ctggaatgtt 660
aaacactaaa tatataacaa gctgtgtttt cctaagctga gatctgttga ataatgttta 720
cattcgtccc ccggggaaat gtatgctcag ccaccattca agagatgact gagaaggaga 780
tggttaagttc aagaagactg attgcacctg ggaccaggc cctttctttg ggatccagtc 840
ccagccttca tccatgtgat taagatccag gccgtggaag ttccccagga aatgatcttc 900
cacttgagca accttttact gctttgctac ccaaccagat tcctcataga gattcctaata 1020
ggtggcctgc agggacctga gctttgctac ccaaccagat ctgggtttga agttgggttg 1080
cactagtttc ttgtattcat aaactcagag atacagaggg cttgggtttga attgggttg 1140
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tgactgtcag catcactgcc gcagcatgct tgactaaggt acctggtttt agccacagcc 1260
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aaacaacaga gttaacctgt ggcattagga gacctacttc atgtggacco ttttttct 1740
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taagacaact cttgtgtacg ctatgttgaa gctcaacaaa aaagtcatgg gaccacttct 1860
agaaatcttt cagctgtcag gcctgtcagt ctcatgacag tttgttggtt gtgccaacaa 1920
ctttattttg gaaaggaaaag cccagatttg aatgggtctt tcccctgggc cttatcctat 1980
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taaagcactt ctgcttaaac tcccatgtgt gaggagtgtg cctccctgtg cctctcagc 2340
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ctaaatttat atgttgaaat gctacctttt ttaaaataag aaactaaata aaattatttt 2460
actatcaaaa aaaaagaaaag gggagggag ggggcggagg gggtaggagg gggggggggg 2513
gagggggggg aggggaatgt ctcgagaggg ggggggtggg ggcgcctcgc agc

```

(2) INFORMATION ON SEQ ID NO. 77:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1962 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

```

accgacggcc gcccttttc gtctttttt tttttacatt tcaaatatat tttattactt 60
tccatcttag aaagaatat aaacctgcat gcaatgctaa tggtttctga catgtacata 120
gcatataaca cagcagtaca atgcggcata tactgggggg cagtgtgtgg agggggcggt 180
cttaagggtta tatgtacaga ggaaagggcg catgggtcatc ttagcttttcg aaagaggact 240
gcactgttta acattgaaga attacatggg gaatcacaaa tatattgctt tagtactgca 300
tgttctgttg tggtagggga aagaaacatg ctttgaaggt tttcccttgt caacagaatg 360
tgtgtctgta gctgtgtatt gcgcatgtat tcatatattt ttaagttttc tcctaaggtt 420
tttgctgaca gtgttgggaa cctcacatgc ttctgaagca ttaaatattg aacctgtgaa 480
cctttcagaa atcctcaggt tgggaaagac cccacacctt ctttaaggat catttgtctc 540
gccatcacag gatcttgga atgtttccta ggggtgtgtaa aaattaacca ggggggaatg 600
aagcacattt ttctggcaac caaacttgag ttcctcagag aacagatgca gagagacctg 660
ctcctgcttg cccggctaca ggggccactg tggagtcaca ctgaggctgt gaccggccat 720
aagcccagga gagcccggtg cagctgtgcc gaggcgccag gacctctaag cggaagcttc 780
ccaagctagg aatggagcaa cactgcaatg aaatgtgtcc accaagctca ttgttcctcc 840
cgggcgctta taaagctcag atgtatagt acgtatggac aaatacaaaa aaaaaaaaaa 900
aaaaaaaaaa aaaaaaagcc tttctttctc acaggcataa gacacaaatt atatattgtt 960
atgaagcact ttttaccac ggtcagtttt tacattttat agctgcgtgc gaaaggcttc1020
cagatgggag acccatctct cttgtgtccc agacttcac acaggctgct ttttatcaaa1080
aaggggaaaa ctcatgcctt tcctttttta aaaatgcttt tttgtatttg tccatacgtc1140
actatacatc tgagctttat aagcgcccg gaggaacaat gagcttggtg gacacatttc1200
attgcagtgt tgctccattc ctagcttggg aagcttcgcg ttagaggtcc tggcgccctc1260
gcacagctgc cacgggctct cctgggctta tggccgggtc cagcctcagt gtgactccac1320
agtggccccc gtagccgggc aagcaggagc aggtctctct gcatctgttc tctgaggaac1380
tcaagttttg ttgccagaaa aatgtgcttc attccccct ggtaattttt tacacaccct1440
aggaaacatt tccaagatcc tgtgatggcg agacaaatga tccttaaaga aggtgtgggg1500
tctttcccaa cctgaggatt tctgaaaggt tcacaggttc aatatttaat gcttcagaag1560
catgtgaggt tcccaacact gtcagcaaaa accttaggag aaaacttaaa aatatatgaal620
tacatgcgca atacacagct acagacacac attctgttga caagggaaaa cttcaaagc1680
atgtttcttt ccctcaccac aacagaacat gcagtactaa agcaatatat ttgtgattcc1740
ccatgtaatt cttcaatgtt aaacagtgca gtcctctttc gaaagctaag atgaccatgc1800
gccctttcct ctgtacatat acccttaaga acgccccctc cacacactgc cccccagtag1860
tacgcaggca ttggtaccgg ctggtgttaa aatggctatg ggacatggtc aggaaccat1920
ttaggcattg gcattgaggg ttccataatc cgtttctaag ga 1962

```

(2) INFORMATION ON SEQ ID NO. 78:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 788 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

```

cgttgcccc gccgcggg cgagatggat tccgggtgct ggttggtcgg cggcgagttc 60
gaggactcgg tgttcgagga gaggccggag cggcggtcag gaccgcccgc gtcctactgc120
gccaagctct gcgagccgca gtggttttat gaagaaacag aaagcagtga tgatggtgaa180
gtgctgactc tcaagaaatt caaaggagac ctggcctaca gacgacaaga gtatcagaaa240
gcactgcagg agtattccag tatctctgaa aaattgtcat caaccaattt tgccatgaaa300
agggatgtcc aggaaggcca ggctcgggtg ctgggtcacc tgggtaggca tatggaggcg360
ctggagattg ctgcaaactt ggaaaataaa gcaaccaaca cagaccattt aaccacggta420
ctctacctcc agcttgctat ttgttcaagt ttgcagaact tggagaaaac aattttctgc480
ctgcagaaac tgatttcttt gcctcctttt aatccttggg actggggcaa attggcagag540
gcttacctga atctggggcc agctctttca gcagcattg cgtcatctca gaaacagcac600
agtttcacct caagtgacaa aactatcaaa tccttctttc cacactcagg aaaagactgt660
cttttgtgtt ttcttgaaac cttgcctgag agctctttaa ttttctgtgg aagggatacg720
aggaatggca ggaaaattgg gaagttttgc aaatgtgcca acctggttgg agaaaggggg780
acaggttt

```

788

(2) INFORMATION ON SEQ ID NO. 79:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 299 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

```
aacctccctc gaggaattg atcttcagcc ctccacctc acaatctaca cagcagcctt 60
gaaggaaaag acgccagact tcagacgtct ctctcctcgc gtctcggaga ccgcggactc120
ccgtaagggtc gcccggtgggc cccgatttgt aatgcggggac aaccccgggc gcgggggtga180
tcataggggt ctccaggcgc cggggtggat gaaggagggt cggggatggg gggttttgta240
aagggggctg tagaaggcgg aaggaaggat gaaatttggg aggggggggg gggggtcac 299
```

(2) INFORMATION ON SEQ ID NO. 80:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 2263 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

attacgacaa	ctctttctaca	tgtagaagaag	gaaaggtatt	ccctgggaag	atttcagtga	60
cagtatcaga	aacatttgac	ccagaagaga	aacattccat	ggcctatcaa	gacttgcata	120
gtgaaattac	tagcttggtt	aaagatgtat	ttggcacatc	tgtttatgga	cagactgtaa	180
ttcttactgt	aagcacatct	ctgtcaccaa	gatctgaaat	gcgtgctgat	gacaagtttg	240
ttaatgtaac	aatagtaaca	atthttggcag	aaaccacaag	tgacaatgag	aagactgtga	300
ctgagaaaa	taataaagca	attagaagta	gctcaagcaa	ctttctaaac	tatgatttga	360
cccttcggtg	tgaattattat	ggctgtaacc	agactgcgga	tgactgcctc	aatgggttag	420
catgcgattg	caaatctgac	ctgcaaaagg	ctaaccacaa	gagcccttct	tgcgttgctt	480
ccagtctcaa	gtgtcctgat	gcctgcaacg	cacagcacaa	gcaatgctta	ataaagaaga	540
gtgggtgggg	ccctgagtg	gcgtgcgtgc	ccggctacca	ggaagatgct	aatgggaact	600
gccaaaagt	tgcatttggc	tacagtggac	tcgactgtaa	ggacaaattt	cagctgatcc	660
tcactattgt	gggcaccatc	gctggcattg	tcattctcag	catgataatt	gcattgattg	720
tcacagcaag	atcaaataac	aaaacgaagc	atattgaaga	agagaacttg	attgacgaag	780
actttcaaaa	tctaaaactg	cggctgcacg	gcttcaccaa	tcttggagca	gaagggagcg	840
tctttcctaa	ggtcaggata	acggcctcca	gagacagcca	gatgcacaaa	ccctattcaa	900
gacacgcag	catgccccgc	cctgactatt	agaatcataa	gaatgtgga	cccgccatgg	960
cccccaacca	atgtacaagc	tattatttag	agtgtttaga	aagactgatg	gagaagtggag	1020
caccagtaaa	gatctggcct	ccgggggttt	tcttccatct	gacatctgcc	agcctctctg	1080
aatggaagtt	gtgaatgttt	gcaacgaatc	cagctcactt	gctaaataag	aatctatgac	1140
attaaatgta	gtagatgcta	ttagcgcttg	tcagagaggt	ggttttcttc	aatcagtaca	1200
aagtactgag	acaatggtta	gggttggttt	cttaattctt	ttcctggtag	ggcaacaaga	1260
accatttcca	atctagagga	aagctcccca	gcattgcttg	ctcctgggca	aacattgctc	1320
ttgagttaag	tgacctaat	cccttgggag	acatacgc	caactgtgga	gggtccgagg	1380
gatgagaag	gatacccacc	accttctcag	ggtcacagc	tcactctctg	acaagtccag	1440
ataggacac	tgcttctatc	cctccaatgg	agagattctg	gcaacctttg	aacagcccag	1500
agcttgcaac	ctagcctcac	ccaagaagac	tggaagaga	catatctctc	agctttttcal	1560
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gtaaaaaaca	tgacctggt	gaaggaagag	aggcaaagga	aactgggtgg	ggaggatcaa	1740
ttagagagga	ggcacctggg	atccaccttc	ttccttaggt	cccctcctcc	atcagcaaag	1800
gagcacttct	ctaatacatg	cctcccgaag	actggctggg	agaaggttta	aaaacaaaaa	1860
atccaggagt	aagagcctta	ggtcagtttg	aaattggaga	caaactgtct	ggcaaagggt	1920
gcgagaggg	gcttgtgctc	aggagtccag	ccgtccagcc	tcgggggtga	ggtttctgag	1980
gtgtgccatt	ggggcctcag	ccttctcttg	tgacagaggc	tcagctgtgg	ccaccaacac	2040
acaacacac	acacacaaac	acacacacaa	atgggggcaa	ccacatccag	tacaagcttt	2100
tacaaaatgtt	attagtgtcc	ttttttattt	ctaatgcctt	gtcctcttaa	aagttatttt	2160
atttgttatt	attatttgtt	cttgactgtt	aattgtgaat	ggtaatgcaa	taaagtgcct	2220
ttgttagatg	gtgaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaa		2263

(2) INFORMATION ON SEQ ID NO. 81:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1284 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

```

aaaaatgggc taaactagct ccagagaact tgtgaattct ttgctaaagc ctctggcaaa 60
aacggcattt gatgaagcaa ttgctgaatt ggatacgctg aatgaagagt cttataaaga 120
cagcactctg atcatgcagt tacttaggga caatctcact ctgtggacat cggaaaacca 180
gggagacgaa ggagacgctg gggagggaga gaactaatgt ttctcgtgct ttgtgatctg 240
ttcagtgtca ctctgtaccc tcaacatata tcccttgtgc gataaaaaaa aaaaaaaaaa 300
aaaaaagagt cgtacgtcga ctttcgattt ttcacagcct cagcctagga aaaatgggtc 360
atgggataaa cagctgggat ttgtatctaa aactcagatt ggtcacataa atgccacggc 420
attccgaagt tttgattttg attaacattg acaggattac tgtgtgttta attttttaa 480
aactgaacac tgtgattatg gggttttgta atttagcaga actcttactg gtagaaaaaa 540
tagacctgaa ttatgtgtaa ctttttgtaa ggtttaatct gatataaaaa taatcattga 600
aatacaattc cattgtaaag ttgtacagaa agttatagag attatattgt gatgctggaa 660
cttggagtga gacacacatc atttggcatt tgagttgaat ggtaattcac agtaatgctg 720
ccgttgttcg ggacttaaaag acacttgacc tgtttgggct gttgccactt aaaagtcat 780
gaccacaaat gtccacagtg tcttcctctg aggaaactcg aatcctgaaa tggaaattct 840
ttgtggcaga taactggctt atgacacctt gaaaagttca agtgctcata taacacacca 900
cactgaaccc cctttcctac agcaatatgt tcactatgtt accaatttgc aacttgtgct 960
tcaatagtgg aatctacttt cattgttaac actgagctaa agaaaaaaag ccgtgtgttt 1020
tatgaatgac cttatctgtt tcctggataa tacctttaag aataatgtcc tgagtcaggc 1080
gtgggtgtgc gtgcatctag tcccaactat ttgggaggct gaggcaggag gatcgcttg 1140
gccaggagt ttaaagctgc agtgccctgt ggttgacact gtgaataact gcactccagc 1200
ctgggcaaca tagcgagacc tcctctccaa aaaagaaaaa aacacaaaag gatgtgtctg 1260
taagaggctt ccctggggga ccag

```

(2) INFORMATION ON SEQ ID NO. 82:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1335 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

```

gggtgacata atgacaggtt aaatatttgt gattcattga ttaaataatta tttaaagaaa 60
tgtaaattca caataagggt tgaaaattat ttggtttcat ccattgtctc ttatttcagg 120
accaagcagc aaactgcagt agtttgtgaa ggattctaata atgggggttca ggaatagcct 180
ctcaacgcta ctaattcaga tctctcccag agaactactg gatttcctca taattgacaa 240
acatgagtga ccacctcttt gggtggctac tgtagaaat ggctgttgct atgttttctg 300
gactttgccg gccaacagat ccctgccagg ttttggaat acttctatta cctcgtgct 360
acttttctgc agggataaaa cttttgaggt ggccagaccc agaacatcca aggattcctg 420
ttacagtgtc acagtataca ctgctcattt atcctattct catgtgcttt cttctttagt 480
aagattattt taagaaaata agtgatattt aaagtccaaa gaggaatgat cacagtgtga 540
taaggggtgt tttcccaactt gaactctgat gtcagtcgac tgtgggtcag agctacaacc 600
atctgttttg tttgatgttt tgggtggtta cttacggagt ggggatagtg tgagacctaa 660
ttccctgtgc aaatgtctct tattccagaa atgtgcattt tgtcatctat aagcaagaaa 720
tatgggcata gcagctcttg gtttaaagtt tgccataacc tgttcattgt tgttttaagc 780
tcaggtaaaag ataacctcct ctttctatga ctccagtttc cattcagggt atagtattat 840
tcaatagtgtg attttctttt taagctgggc aataaattga tgtttccaga tggtaacatg 900
ggagagggca tataggataa agatgagcaa attctaccct aaaaatgttc tagtagttca 960
caggaagaag atgaggttta ataactttca aggtattctt agattgacat tttgagggga 1020
aaatgggctc ttgttctagt tgaagtgagc agagaaggct ataaattaat atgtaactta 1080
cagcattcca gaggttaaaa ataactgatg cagatgtact tcttcagtgt gattcttcag 1140
atcaaacttt tacttttggc atagttaatt tcagaaaaat gtgctgtatg tgtgtgtgta 1200
tgaggggttg tcttgctgat ccttcagtta gctctaaatt ctggcaactc cttgtaattc 1260
ccatgtattt gataccatga accaatcatg ttgaatgcgt ttggtgatct ggggagcctc 1320
ccccgtcttc ccagg

```


(2) INFORMATION ON SEQ ID NO. 83:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1890 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

```

ggcttgtggc ggctctgcc caggggcagg tgttgagggg ctcccgggcc ggctgccgcc 60
gctccccgc tccggacccg gggctcccc tagcgccgct gaggagccgc ctctgcggtc 120
caggagggcg caggagcggg actgagagcg cctggaggct cgagcagagg atagaaggac 180
aaggacagaa tcaccagcac tggctgaagg taccttaaca tggggaatct tcttaaagtt 240
ttgacatgca cagaccttga gcaggggcc aattttttcc ttgattttga aaatgccag 300
cctacagagt ctgagaagga aatttataat cagggtgaatg tagtattaaa agatgcagaa 360
ggcatcttgg aggacttgca gtcatacaga ggagctggcc acgaaatacg agaggcaatc 420
cagcatccag cagatgagaa gttgcaagag aaggcatggg gtgcagttgt tccactagta 480
ggcaaatata agaaatttta cgaattttct cagagggttag aagcagcatt aagaggctct 540
ctgggagcct taacaagtac cccatattct cccaccagc atctagagcg agagcaggct 600
cttgctaacc agtttgcaga aattcttcat ttcacactcc ggtttgatga actcaagatg 660
acaaatcctg ccatacagaa tgatttcagc tattatagaa gaacattgag tcgtatgagg 720
attaacaatg taccggcaga aggagaaat gaagtaata atgaattggc aaatcgaatg 780
tctttgtttt atgctgaggg aactccaatg ctgaaaacct tgagtgatgc cacaacaaaa 840
tttgatcag agaataaaaa ttaccaata gaaaatacca cagattgttt aagcacaatg 900
gctagtgtat gcagagtcac gctggaaaca ccggaataca gaagcagatt tacaatgaa 960
gagacagtgt cattctgctt gagggtaatg gtgggtgtca taatactcta tgaccacgta 1020
catccagtgg gagcatttgc taaaacttcc aaaattgata tgaaagggtg tatcaaagtt 1080
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aaacatttga atgatgagac tacctccaag caaattaaat ccatgctgca ataacaattc 1200
tggaataagc acctgctgta gacagaagac agtattctgc aatgactgag aatgcagttt 1260
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attggggtct ctactgagaa aaattctgtg acttgaacta aatattttta aatgtggatt 1500
ttttttgaaa ctaattatta atattgcttc tctgcatgg caaaactgcc tattctgcta 1560
tttaaaaacc ctcaatgact ttattttcta ctgccgcctt tttcatgtgc aaccaaagtt 1620
aaaatgttta aattaactgt gttgtacaaa tggtagccaa cacaaacttt ttttaaattal 1680
gtaatacttt tgtttaaagt ttttaagtgt caatttgact ttttttgtaa gtagtatgt 1740
tgtgtgttta acctttatta actaacgtta aaagctgtga tgtgtgcgta gaattattac 1800
tatgtcatgt catgtctaaa gaatggctgt tgatgataaa ataaaaatca gctttcattt 1860
ttctaaaaaa aaaaaaaaaa aaaaaaaaaa

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1890

(2) INFORMATION ON SEQ ID NO. 84:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1829 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

```

gaccaacctg acgcagatcg agctgcgggg caaccggctg gagtgcctgc ctgtggagct 60
gggcgagtgc ccactgctca agcgcacggc ttggtggttg aggaggacct gttcaacaca 120
ctgccaccgg aggtgaagga gcggctgttg agggctgaca aggagcaggc ctgagcgagg 180
ccggcccagc acagcaagca gcaggaccgc tgcccagtc tcaaggcccg aggggcaggc 240
ctagcttctc ccagaactcc cggacagcca ggacagcctc gtggctgggc aggagcctgg 300
ggccgcttgt gagtcaggcc agagcgagag gacagtatct gtggggctgg ccccttttct 360
ccctctgaga ctacgtccc ccagggcaag tgcttgtgga ggagagcaag tctcaagagc 420
gcagtatttg gataatcagg gtctcctccc tggaggccag ctctgccccca ggggctgagc 480
tgccaccaga ggctcctggga ccctcacttt agttcttggg atttattttt ctccatctcc 540
cacctccttc atccagataa cttatacatt cccaagaaag ttcagcccag atggaagggtg 600
ttcagggaaa ggtgggctgc cttttccctt tgccttatt tagcgatgcc gccgggcatt 660
taacacccac ctggacttca gcagagtggg ccggggcgaa ccagccatgg gacggtcacc 720
cagcagtgcc gggctgggct ctgcggtgcg gtcacggga gagcaggcct ccagctggaa 780
aggccaggcc tggagcttgc ctcttcagta tttgtggcag ttttagtttt ttgttttttt 840
ttttttaatc aaaaaacaat ttttttaaaa aaaaaagctt tgaaaatgga tggtttgggt 900
attaaaaaga aaaaaaaaaa ttaaaaaaaaa aaagacacta acggccagtg agttggagtc 960
tcagggcagg gtggcagttt cccttgagca aagcagccag acgttgaact gtgtttcctt 1020
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gggaggagac tcgggttggc taatccccgg atgaacggtg ctccattcgc acctcccctc 1260
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cagactttgt ttccccaccg cctgcggcat ggggtgtgtc agtgccaccg ctggcctccg 1380
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gtcgggaatg gggaggctgc ccctgggagg gcaggcggtg gttccaagcc ggttcccgtc 1500
cctgggcgct ggagtgcaca cagcccagtc ggcacctggt ggctggaagc caccctgctt 1560
tagatcactc ggggtcccac cttagaaggg tccccgcctt agatcaatca cgtggacact 1620
aaggcacgtt ttagagtctc ttgtcttaat gattatgtcc atccgtctgt ccgtccattt 1680
gtgttttctg cgctcgtgtc ttggatataa tcctcagaaa taatgcacac tagcctctga 1740
caaccatgaa gcaaaaatcc gttacatgtg ggtctgaact tgtagactcg gtcacagtat 1800
caaataaaat ctataacaga aaaaaaaaaa

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(2) INFORMATION ON SEQ ID NO. 85:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2358 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

```

cgaaacgccc  cggagtgagg  cagttccgct  ggctagtgtg  tacgcggcga  gcttctcccg  60
gcgcgcgccc  ctgcgctccc  atagcgcccg  cgacagggtc  cggacgcccg  ccgaacatgg  120
actccgcccg  ccaagatata  aacctgaatt  ctctaataca  aggtctgctg  tctgactcca  180
tgacggatgt  tctgtcgac  acaggtgtgg  ctgcccggac  tctgtctgtt  gagggctga  240
cagaggctga  ggaggaggag  ctcaaggctg  agcttaccaa  ggtggaagag  gaaattgtca  300
ctctgcgcca  ggtcctggca  gccaaaggaga  ggcactgtgg  agagctcaag  aggaggctgg  360
gcctctccac  cctgggggag  ctgaaacaga  acctgtccag  gagctggcat  gacgtgcagg  420
tctctagcgc  ctatgtgaaa  acttctgaga  aacttggaag  gtggaatgag  aaagtgaccc  480
agtcagacct  ctacaagaag  actcaggaaa  ctctttcaca  ggcaggacag  aagacttcag  540
ctgcctgtc  cacagtgggc  tctgccatca  gcaggaagct  tggagacatg  aggaactctg  600
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atcccgcaac  tttctaagcc  tgtggttgct  tcacccgctg  cagagcacac  gcaacccagc  780
ctcagcatca  cagccgcagc  tctgttcagc  ggagcagcca  gccaggggcg  atgagcagag  840
ccggccctga  ggacagtcc  gcccatccac  gcggagatgt  ggctgccgcg  tttgcatgaa  900
tttgaagaac  acaggcttgt  acacagatgt  tttacactca  cgtttgtaga  tgaaacagat  960
cactgtgctg  tcttccctag  ggtgagcagg  agtggacagg  gcggagggtt  tgaaagaata  1020
ttgagccaaa  gccaggctc  ctttgggaa  tcatgttagc  ccatacgaat  gttgaaggat  1080
tgaagagttc  taagcataaa  ataagtggca  ttttctgact  tcttctctct  cctccttccc  1140
tgactcacag  aaggaatgca  atcaccagc  aagtcctacc  tgttacgcaa  ttttttatct  1200
caaaatgccg  aacgagaaaa  ctgtccattt  tctgagaccc  ccagaaaagg  aactgacctt  1260
cagcagctgc  ctgattgtta  cgcgaatcta  gctttaacgg  aagcaaattc  attatttttt  1320
aaatgcagtg  gacttttcaa  aaagttttaa  ttaggcaaag  cagcttttag  ctcatagaat  1380
attattttct  tggactcaag  ctgaaataca  agccttacat  tgccttatgc  tttattttct  1440
tctaattttt  atatgtatat  agatgagggt  tccttaatgg  ttgtgagcat  tgtgtggaat  1500
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catcccagtg  tacaaaacct  gcttctcttc  tcaaccgtgg  cagctcccgc  tggctcctat  1620
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gtctttttct  caggagctac  aaagatctct  tcctgttact  aaatggtcgc  accccagcag  1920
cctctctcgc  acaccggggc  cctgcatgtc  agatggcgtg  gtctgcaggg  ggagctctgt  1980
gccttagtg  ctcttggcag  gacactgagg  gcctgcctgt  ggtgtgcccg  gctctgccac  2040
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gttattataa  taatgggtaa  tttgtcaata  aagcattcct  ttgggggaaa  aaaaaaaaaa  2340
aaaaaaaaaa  aaaaaaaaaa

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2358

(2) INFORMATION ON SEQ ID NO. 86:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1646 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

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cagctgcgga actgcgcgat tgtggttccc gccgtatttc ccgttcccca tctagtaact 60
cccatctcag cccacgtatc tccctgagtg gaaatctcgg gccccagacc agtcgattgg 120
gaggtecgcc ctccccttca gcgacttggt ctgtgttttg gcagttgccg cgacaacagt 180
cacttccggg aagggggtct gcgaatctcc ttccgctcgg cgcgtcagaa tcagctgtcc 240
tctcagactg tgtgggtggg ttccccggcc gcagctccgt acgggcttgg attgctgggc 300
ctcgggtgcac cccagcctcc cccactcggg ttctgagctt gagctggcgg ctctttaact 360
ctgcttcact gttgctcttg gcaacatcca cttccgggag cgagtgccgt ttcccccgct 420
caccgcgggc tagggagcgt gggattccgg actgtgagcg gctgttagtg cgtcgcagct 480
gctggcgatc cggcgaccct cggccggcag gacccgcggg ccacgcagcc ggggccttct 540
caacgcctca gtacctcggc gggaccgcca tggttctgct gcacgtgaag cggggcgacg 600
agagccagtt cctgctgcag gcgcctggga gtaccgagct ggaggagctc acggtgcagg 660
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ttaaaaagga tgatattgga cgaaggaatg ggcaagctcc aaatgagaag atgaagcaag 900
tgttaaagaa gactatagaa gaagccaaag caataatatc taagaaacaa gtggaagccg 960
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gcctattatt agcagtgagg agcagaagca tgtgatgctg tactatcaca gaagacaaga 1320
ggagctcaag agattggaag aaaatgatga tgatgcctat ttaaactcac catgggcgga 1380
taacactgct ttgaaaagac attttcatgg agtgaaagac ataaagtgga gaccaagatg 1440
aagttcacca gctgatgaca cttccaaaga gattagctca cttttctcct aggcaattat 1500
aatttaaaaa aaaaaaaaag gccacttact gccctctgta aaagatgtta acatttctag 1560
ttttctttta gtgtgaattt taaaatagc agttattcaa ggttttagaa cttaataaat 1620
acctagtcag aagaaaaaaa aaaaaa

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1646

(2) INFORMATION ON SEQ ID NO. 87:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3096 base pairs
- (B) TYPE: Nucleic acid.
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

```

gcgggtgacg cgacgacggc tcgacacttt gctacggagt gcatcggacg tcgaagccta 60
gagtctctgc gtctttccct cttccgctgc ctcattcctt tccttcctag ccttggtcgt 120
cgccgccacc atgaacaaga agaagaaacc gttcctaggg atgcccgcgc ccctcggcta 180
cgtgccgggg ctgggccggg gcgccactgg cttcaccacg cggtcagaca ttgggcccgc 240
ccgtgatgca aatgaccctg tggatgatcg ccattgcacc ccaggcaaga gaaccgttgg 300
ggaccagatg aagaaaaatc aggtgctga cgatgacgac gaggatctaa atgacaccaa 360
ttacgatgag tttaatggct atgctgggag cctcttctca agtggaccct acgagaaaga 420
tgatgaggaa gcagatgcta tctatgcagc cctggataaa aggatggatg aaagaagaaa 480
agaaagacgg gagcaaaggg agaaagaaga aatagagaaa tatcgtatgg aacgccccaa 540
aatccaacag cagttctcag acctcaagag gaagttggca gaagtcacag aagaagagtg 600
gctgagcatc cccgaggttg gcgatgccag aaataaacgt cagcgggaacc cacgctatga 660
gaagctgacc cctgttccctg acagtttctt tgccaaacat ttacagaccg gagagaacca 720
tacctcagtg gatccccgac aaactcaatt tggaggtctt aacacaccct atccaggtgg 780
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tgtgcacgag ccattctacg ctacgccctg caggtgttcc ccagcaagaa gagtgtgtgg 1860
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aagtggctgg caggggatgt gcctgcagca aggagcatcc tggccctggc cttccaggcc 2040
aaccccaaca gtgaggagat ctggctggca gccgtgaagc tggagtccga gaatgatgag 2100
tacgagcggg cccggaggct gctggccaag gcgcggacag tgccccacc gcccggtgtg 2160
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cactcatggc caaggcgtg caggagtgcc ccaactccgg tatcctgtgg tctgaggcca 2580

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acatcgccaa ctggcagaag aagatcgggg acatccttag gctggtggcc ggccgcata 2940
agaacacctt ctgattgagc ggttgccatg gccgtctcc gtggggcagg gttggggcgc 3000
atgtggaagg gctctgagct gtgtcctcct tcattaaaag tttttatgtc tctgttcaga 3060
aaaaaaaaa aaagaaaaaa gggggcgccc gggggc
3096

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(2) INFORMATION ON SEQ ID NO. 88:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1906 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

```

gcgctcgctg aggcaagagg agggcactcg gccgcggcct gacagggact tagcccacag 60
agaccggccc gcgcgcgcga cccacacccc acccactcgt ccacctaccc actccccgcg 120
ccgcctcctc ccacctgag cagagccacc gaggatgata aacacccagg acagtagtat 180
tttgccgttg agtaagtgtc ccagctcca gtgctgcagg cacattgttc cagggcctct 240
gtggtgctcc tgatgcccc caccactgt cgaagatccc cgggtggcga gggggcgga 300
gggatccttc tctctcagct ctaatatata aggacgagaa gctcactgtg acccaggacc 360
tccctgtgaa tgatggaaaa cctcacatcg tccacttcca gtatgaggtc accgaggtga 420
aggtctcttc ttgggatgca gtccgttcca gccagagcct gttttagtaa atcccagatg 480
gattattagc tgatgggagc aaagaaggat tgtagcact gctagagttt gctgaagaga 540
agatgaaagt gaactatgtc ttcatctgct tcaggaaggg ccgagaagac agagctccac 600
tcctgaagac cttcagcttc ttgggctttg agattgtacg tccaggccat ccctgtgtcc 660
cctctcggcc agatgtgatg ttcatggttt atcccttga ccagaacttg tccgatgagg 720
actaatagtc atagaggatg ctttacccaa gagccacagt gggggaagag ggggaagttag 780
gcagccctgg gacagacgag agggctcctc gctgtctagg gaaggacact gaggggctca 840
gggtgagggt tgccatttgt gttctcgga ttgactcgtt gaaattgttt tccataaaga 900
acagtataaa catattattc acatgtaatc accaatagta aatgaagatg tttatgaact 960
ggcattagaa gcttttctaa ctgctgtgtg tgatgtgttc tatctagcct aggggaggac1020
attgcctaga gggggaggga ctgtctgggt tcaggggcat ggcctggagg gctggtgggc1080
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gtattttctt tctttgcttc ctgtcacccc aggggctcct gagtataggc ttttcagtcc1200
ctgggcagtg tccttgagtt gttttttgac actcttacct gggcttctct gtgtgcattt1260
gcgtctggcc tggagtaagc aggtccgacc cctccttctt tacagcttag tgttattctg1320
gcatttggtt aagctggctt aatctgttta atgttatcag tacattttaa ataggggcat1380

tgaattttac tcccaccacc agggcttttt tgggggatgc ctgggccttt aaaacactag1440
ccaaactcta attaatctc aaatcactgc caggagttct tgctcctggc tgcaggccca1500
ggccccaagg tctccttctt ggggtcacaa acagcagtaa ggaagaggaa tatatagcaa1560
ctcagggcct gggaattgtg gggcaatccg ttcttaggga ctggatactt ctggctggct1620
gagtatagta ctagctgcct ccccaccagg ttccgagtag tgtctgagac tctgctctgc1680
agggcctagg gtagcgctgg gagtgtagaa gtggcctgcc cttaactgtt ttactaaac1740
agctttttct aaggggagag caagggggag agatctagat tgggtgaggg ggacggggat1800
gtcagggagg caagtgtgtt gtgttactgt gtcaataaac tgatttaaa ttgtaaaaaa1860
aaaagaaagg ggggggggtg aggggagggg gggggaaaaa aaaaaa 1906

```


(2) INFORMATION ON SEQ ID NO. 90:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 349 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

```

gctaagagga caagatgagg cccggcctct catttctcct agcccttctg ttcttccttg 60
gccaagctgc aggggatttg ggggatgttg gacctccaat tcccagcccc ggcttcagct120
ctttcccagg tgttgactcc agctccagct tcagctccag ctccaggteg ggctccagct180
ccagccgcag cttaggcagc ggaggttctg tgtcccagtt gttttccaat ttcaccggct240
ccgtggatga ccgtgggacc tgccagtgtc ctgtttccct gccagacaac aactttccc300
tggacagagt ggaacgttgg aattcacagc tcatagttat ttctcagag          349

```

(2) INFORMATION ON SEQ ID NO. 91:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2142 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

```

cagacccaga aagtagtgac cagccctcct cggattaccc ttcattggct cctcccttgc 60
gccgcccacc ctccagattt gcataaaaaa ggccaagaaa actctggctg tgccccagca 120
acggctcatt ctgtcccccc gggtcggagc ccccgaggc tgcgcgcggg cttgcagcgc 180
ctcgcccgcg ctgtcctccc ggtgtcccgc ttctccgcgc cccagccgcc ggctgccagc 240
ttttcggggc cccgagtcgc acccagcgaa gagagcgggc ccgggacaag ctcgaaactcc 300
ggcgcgctcg ccttcccccg gctccgctcc ctctgcccc tgggggtcgc gcgcccacga 360
tgctgcaggg ccttggtcgc ctgtgtgtgc tcttcctcgc ctgcgactgc tgctgggct 420
cggcgcgcgg gctcttcttc tttggccagc ccgacttctc ctacaagcgc agaattgcaa 480
gcccattccc gccaacctgc agctgtgcca cggcatcgaa taccagaaca tgcggctgcc 540
caacctgctg ggccacgaga ccatgaagga ggtgtctggag caggccggcg cttggatccc 600
gctgtgcatg aagcagtgcc acccggacac caagaagttc ctgtgtcgc tcttcgcccc 660
cgtctgcctc gatgacctag acgagaccat ccagccatgc cactcgctct gcgtgcagg 720
gaaggaccgc tgcgcccccg tcatgtccgc cttcggttc cctggccccg acatgcttga 780
gtgcgaccgt ttccccccag acaacgacct ttgcatcccc ctcgctagca gcgaccacct 840
cctgccagcc accgaggaag ctccaaagg atgtgaagcc tgcaaaaata aaaatgatga 900
tgacaacgac ataattgaaa cgctttgtaa aaatgatttt gcaactgaaa taaaagtga 960
ggagataaac tacatcaacc gagataccaa aatcatcctg gagaccaaga gcaagaccat 1020
ttacaagctg aacgggtgtg ccgaaaggga cctgaagaaa tcggtgtgtg ggctcaaaga 1080
cagcttgcatg tgcacctgtg aggagatgaa cgacatcaac gcgccctatc tggctcatggg 1140
acagaaacag ggtggggagc tggatgatcac ctcggtgaag cgggtggcaga aggggcagag 1200
agagttcaag cgcattctcc gcagcatccg caagctgcag tgctagtccc ggcattcctga 1260
tggctccgac aggcctgtc cagagcacgg ctgaccattt ctgctccggg atctcagctc 1320
ccgttcccca agcacactcc tagctgtctc agtctcagcc tgggcagctt cccctgect 1380
tttgacgctt tgcattcccc gcatttctct agttataagg ccacaggagt ggatagctgt 1440
tttcacctaa aggaaaagcc caccogaatc ttgtagaaat attcaaacta ataaaatcat 1500
gaatattttt atgaagttaa aaaatagctc acttttaaagc tagttttgaa taggtgcaac 1560
tgtgacttgg gtctggttgg ttggtgtttg ttgttttgag tcagctgatt ttcacttccc 1620
actgaggttg tcataacatg caaattgctt caattttctc tgtggcccaa acttgtgggt 1680
cacaaaccct gttgagataa agctggctgt tatctcaaca tcttcatcag ctccagactg 1740
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ctgttacatg tatcacattc cagctacaat acttccattt attagaagca cattaaccat 1860
ttctatagca tgatttcttc aagtaaaaagg caaaagatat aaattttata attgacttga 1920
gtactttaag ccttgtttta aacatttctt acttaacttt tgcaaattaa acccattgta 1980
gcttacctgt aatatacata gtagtttacc tttaaaagtt gtaaaaatat tgctttaacc 2040
aacactgtaa atatttcaga taaacattat attcttgat ataaacttta catcctgttt 2100
tacctataaa aaaaaaaaaa aaaaaaaaaa aaaaaaggg aa 2142

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(2) INFORMATION ON SEQ ID NO. 92:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1111 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

```

cgtgggcgaa catgggagct gttcctcgcg ggccgcccgg tgctgggtcac cggggcaggc 60
aaaggtatag ggcgcgccac ggtccaggcg ctgcacgcga cgggcgcgcg ggtgggtggct 120
gtgagccgga ctcaggcgga tcttgacagc cttgtccgcg agtgcccggg gatagaaccc 180
gtgtgcgtgg acctgggtga ctgggaggcc accgagcggg cgctgggcag cgtgggcccc 240
gtggacctgc gcggagactg cgccgacatg gagctgttcc tcgcgggccg ccgggtgctg 300
gtcaccgggg caggcaaagg tataggcgcc ggccaggtcc aggcgctgca cgcgacgggc 360
gcgcgggtgg tggctgtgag ccggactcag gcggatcttg acagccttgt ccgcgagtgc 420
ccggggatag aaccctgtgt cgtggacctg ggtgactggg aggccaccga gcgggcgctg 480
ggcagcgtgg gccccgtgga cctgctggtg aacaacgccg ctgtcgccct gctgcagccc 540
ttcctggagg tcaccaagga ggcctttgac agatcctttg aggtgaacct gcgtgcggtc 600
atccaggtgt cgcagattgt ggccaggggc ttaatagccc ggggagtcce aggggccatc 660
gtgaatgtct ccagccagtg ctcccagcgg gcagtaacta accatagcgt ctactgctcc 720
accaaggggt ccctggacat gctgaccaag gtgatggccc tagagctcgg gccccacaag 780
atccgagtga atgcagtaaa ccccacagt gtgatgacgt ccatgggcca ggccacctgg 840
agtgaccccc acaaggccaa gactatgctg aaccgaatcc cacttggcaa gtttgctgag 900
gtagagcacg tgggtgaacgc catcctcttt ctgctgagt accgaagtgg catgaccacg 960
ggttccactt tgccggtgga agggggcttc tgggcctgct gagctccctc cacacacctc 1020
aagcccatg ccgtgctcat cctaccccca atccctcaa taaacctgat tctgctgccc 1080
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa g 1111

```

(2) INFORMATION ON SEQ ID NO. 93:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 657 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

```

atttaaagcc tggattgtaa ccagattttc ttttttcccc cttctcagct gtagatatga 60
tatctccttt cagggcccca gcttaagggc aaagttaggtt aatgtgtaga caaaggcgag120
ggacaagaga gagttaacat ctagacagtg gaaaaagcca tgggtgtgtgg tttctgggaa180
ccaccaacac ttgcaggttt agctttttcc cagggttgac tacaagaaag aaaaccatgt240
ttttgcaaga ttaaaatgtg gttgagtggt cctaaattaa ccatcccat ttttatcata300
tttccacat cacttcaggg ttttaagagt cagtgtcac ctgggcggac tggtagtaca360
ttttgcttct tagaaagcta agtcctgggt tccgtctgat tttaggttcc aggaacttcc420
tgagaacacc cgatcgaga gggtaatttt ctggagtttg ttttgcaggg atagctggga480
gtatggccac cctgtccac gatgcggtaa tgaatccagc agaagtgggt aagcagcgct540
tgcagatgta caactcgag caccggtcag caatcagctg catccggacg gtgtggagga600
ccgagggggt gggggccttc taccggagct acaccacgcc gagccctatc tcgtgcc 657

```

(2) INFORMATION ON SEQ ID NO. 94:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 863 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

```

gcggtcggta gtgcggcgct gtttaaagat ggcgggcgag gaacctcagc agcagaagca 60
ggagccgctg ggcagcgact ccgaagggtg taactgtctg gcctatgatg aagccatcat120
ggctcagcag gaccgaattc agcaagagat tgctgtgcag aaccctctgg tgtcagagcg180
gctggagctc tcggtcctat acaaggagta tgctgaagat gacaacatct atcaacagaa240
gatcaaggac ctccacaaaa agtactcgta catccgcaag accaggcctg acggcaactg300
tttctatcgg gctttcggat tctccactt ggaggcactg ctggatgaca gcaaggagtt360
gcagcgggtc aaggctgtgt ctgccaaag caaggaagac ctggtgtccc agggcttcac420
tgaattcaca attgaggatt tccacaacac gttcatggac ctgattgagc aggtggagaa480
gcagacctct gtgcggcacc tgctggcctc cttcaatgac cagagcacct ccgactacct540
tgtggtctac ctgcggctgc tcacctcggg ctacctgcag cgcgagagca agttcttcga600
gcacttcata gaggggtggac ggactgtcaa ggagttctgc cagcaggagg tggagcccat660
gtgcaaggag agcgaccaca tccacatcat tgcgctggcc caggccctca gcgtgtccat720
ccaggtggag tacatggacc gcggcgaggg cggcaccacc aatccgcaca tcttccctga780
gggcttccga gcccaaggct ttacctgtt ttaaccggct tggggcaatt taggtattgc840
ttttacaaa taggggtttg gtt

```

863

(2) INFORMATION ON SEQ ID NO. 95:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1015 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

```

aattcggaac gagggcgccct gcaagccatg atgacccacc tgcattgtgaa gtctacagaa 60
cccaaagctg cccctcagcc cctgaatctg gtatcaagtg tcacctctc caagtccgca 120
tcggaggctt ctccacagag cttacctcat actccaacga cccaaccgc cccctgact 180
cccgtcaccc aaggccccctc tgtcatcaca accaccagca tgcacacggt gggacccatc 240
cgcaggcggt actcagacaa atacaacgtg cccatttcgt cagcagatat tgcgcagaa 300
caagaatttt ataagaacgc agaagttaga ccaccattta catatgcata ttaattagg 360
caggccattc tcgaatctcc agaaaagcag ctaacactaa atgagatcta taactgggtc 420
acacgaatgt ttgcttactt ccgacgcaac gcggccacgt ggaagaatgc agtgcgcat 480
aatcttagtc ttcacaagtg ttttgtgcga gtagaaaacg ttaaaggggc agtatggaca 540
gtggatgaag tagaattcca aaaacgaagg ccacaaaaga tcagtggtaa cccttccctt 600
attaaaaaca tgcagagcag ccacgcctac tgcacacctc tcaatgcagc ttacaggct 660
tcaatggctg agaatagtat acctctatac actaccgctt ccattgggaaa tcccactctg 720
ggcaacttag ccagcgcaat acgggaagag ctgaacgggg caatggagca taccaacagc 780
aacgagagtg acagcagtc aggcagatct cctatgcaag ccgtgcatcc tgtacacgtc 840
aaagaagagc cctcgatcc agaggaagct gaaggggccc tgccttagt gacaacagcc 900
aaccacagtc cagattttga ccatgacaga gattacgaag atgaaccagt aaacgaggac 960
atggagtgc tatcggggcg ggccaacccc gagaatgaag attggaaaaa aaaaa 1015

```

(2) INFORMATION ON SEQ ID NO. 96:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2532 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

gctcgatgtg	caagtgaagg	atgattccag	ggccctgact	ttaggagcac	tgacgctgcc	60
tctggcccg	ctgctgactg	ccccagaact	catcctggac	cagtgggtcc	agctcagcag	120
ctctgggtcca	aactccagac	tctatatgaa	actagtcag	aggatcctgt	acttggattc	180
atcagaaata	tgcttcccca	cggtgcctgg	ttgtcctgg	gcttgggacg	tgacagtgga	240
gaatccccag	agaggcagca	gtgtggatgc	cccacctcga	ccctgtcaca	cgactcctga	300
tagccagttt	gggactgagc	atgtgcttcg	gatccatgta	ttagaggccc	aggacctgat	360
tgccaaagac	cgtttcttgg	ggggactgg	gaagggcaag	tcagacccct	atgtcaaact	420
aaagtgtgga	ggacgaagct	tccggagcca	tggtgttcgg	gaagatctca	atccccgctg	480
gaatgaggtt	tttgaggtga	tcgtcacatc	agttccaggc	caagagctag	aggttgaagt	540
ctttgacaag	gacttggaca	aggatgattt	tctgggcagg	tgtaaagtgc	gtctcaccac	600
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gctgcaggtg	aatagtttga	tccagactca	gaagagtgcg	gagctggctg	cgccctgct	780
atccatctat	atggagcggg	cagaggacct	cccgctgcga	aaaggcacca	agcacctcag	840
cccttatgct	actctcactg	tgggagatag	ttctcataaa	accaagacta	tttcgcaaac	900
ttcagccctt	gtctgggatg	agagtgcctc	ctttctcatc	aggaaaccac	acactgagag	960
cctagagttg	caggttcggg	gtgagggcac	tgccgtgctg	ggctcattat	ccctgcccct	1020
ctcagagctc	ctcgtggctg	accagctctg	cttggaccgc	tggtttacac	tcagcagtggt	1080
tcaggggcag	gtgctactga	gagcacagct	agggatcctg	gtgtcccagc	actcgggagt	1140
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ctcgggggga	ccccctcaca	tcacctcctc	agccccagag	ctccggcagc	gcctaacaca	1260
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aggcaccaag	aggaggacct	cacagaagaa	gaggaccctg	agtcctgaat	ttaatgaacg	1500
gtttgagtgg	gaactcccc	tggatgaggc	ccagagacga	aagctggatg	tctctgtcaa	1560
gtctaatttc	tccttcatgt	caagagagcg	tgactgctgg	ggaaggtgca	gctggacctt	1620
gctgagacag	acctttccca	gggtgtagcc	cggtgggtatg	acctgatgga	caacaaggac	1680
aagggcagct	cctaggagct	ggcgagtccc	agcctgactg	ctctgtcttc	ctgccttcgt	1740
ctcgtcccat	caccgcctca	atgtgatgag	cctaaagcta	gggtccaagg	gcagagcctg	1800
tgcccttcag	ccctttcacc	taacaggccc	atattcgggc	ctttgcctga	ccaaagagaa	1860
gaaccgtatg	ttccctttac	tgcacggcct	ttatccttct	gggcccctgg	ggcggggacc	1920
tgagctggct	gtttcctgct	ttgcctgcac	attgttctcc	cttccctcca	actcctcagg	1980
gccttctgta	tctgtgcctg	gccagtggca	gcactagcag	tggtattagc	ttatgcaaaa	2040
tacagctttg	gaaggatctt	tttttcttta	actagatgg	caccttcttc	cctaccacac	2100
atgggtggga	aggtggacag	gctaacctct	ccagctgtga	gcctcttaga	ctactgcatg	2160
tagcaaatgt	tcagcagctc	aggccccat	gtccagttct	gtccccactg	tcctcaaccc	2220
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aggacgcgtg	gattctactc	aagcctccaa	gtagtggcat	atcagtcttg	gagctcctag	2340
ctgggtgatac	ggagagggct	ttggaggact	tgggacagca	gggccaattt	ttttgccccaa	2400
gtgcctaggc	tgctaactca	ctgactagaa	cttaatctgg	tactttacag	ttttgcacca	2460
actctgccaa	gccactggat	cttacattaa	acatcatact	caaaaaaaaa	aaaaataaaa	2520
ataaaaaaaaa	aa					2532

(2) INFORMATION ON SEQ ID NO. 98:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 776 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

```

tttttttttt tttttttttt tttttttttt ttttgagaca aagtctcact gtgtcaccca 60
gactggaatg cagtgcacac atctcggtc actgaaacct ctgccttcca ggttcaagct120
attctcatgc ctgagcctct caagtagctg ggactacaga tgtgggccac catgtctggc180
taattttttt ttttttttgt agagacaggg tttcgccatg ttgacgagac tgggtctcgaa240
ctcctggcct caagtgatct gccgcctcag cttctcaaag tactgggatt atataggcat300
gagccactga gcctggccct gaagcgtttt tctcaaaggc cctcagttag ataaattaga360
tttggcatct cctgtcctgg gccagggatc tctctacaag agcccctgcc cctctgttgg420
aggcacagtt ttagaataag gaggaggagg gagaagagaa aatgtaaagg agggagatct480
ttcccaggcc gcaccatttc tgtcactcac atggacccaa gataaaagaa tggccaaacc540
ctcacaaccc ctgatgtttg aagagttcca agttgaaggg aaacaaagaa gtgtttgatg600
gtgccagaga ggggctgctc tccagaaagc taaaatttaa tttctttttt cctctgagtt660
ctgtacttca accagcctac aagctggcac ttgctaacaa atcagaaata tgacaattaa720
tgattaaaga ctgtgattgc caccaaaaaa aaaaaaaca gccaggaaaa aaaggg 776

```

(2) INFORMATION ON SEQ ID NO. 99:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 629 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

```

cggctcgact tccgttactt gctgcggagg accgtgggca gccagggtcg gtgaaggatc 60
ccaaaatggc tgggcgaaaa cttgctctaa aaaccattga ctgggtagct tttgcagaga120
tcatacccca gaaccaaaag gccattgcta gttccctgaa atcctggaat gagaccctca180
cctccaggtt ggctgcttta cctgagaatc caccagctat cgactgggct tactacaagg240
ccaatgtggc caaggctggc ttggtggatg actttgagaa gaagtttaat gcgctgaagg300
ttcccggtgc agaggataaa tatactgccc aggtggatgc cgaagaaaaa gaagatgtga360
aatcttgtgc tgagtgggtg tctctctcaa aggccaggat tgtagaatat gagaaagaga420
tggagaagat gaagaactta attccatttg atcagatgac cattgaggac ttgaatgaag480
ctttcccaga aaccaaatga gacaagaaaa agtatcccta ttggcctcac caaccaattg540
agaatttata aaattgagtc caggaggaag ctctggccct tgtattacac attctggaca600
ttaaaaataa taattataca aaaaaaaaaa
629

```

(2) INFORMATION ON SEQ ID NO. 100:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 757 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

```

ggcggggagc agggggacac caggggtgaat caggaagacc cgaggggtgg cccccaccct 60
ttctccaccc acgcggcagg ttccagggtgc cctgggtgga gtcagtcctc atcgtagtca120
gcaacaacat tgacgaggag gcgctggccc gactggccca ggagggcagt gaggtgaatg180
tcattggcat tggcaccagt gtggtcacct gcccccaaca gccttccttg ggtggcgtct240
ataagctggt ggccgtgggg ggccagccac gaatgaagct gaccgaggac cccgagaagc300
agacgttgcc tgggagcaag gctgctttcc ggctcctggg ctctgacggg tctccactca360
tggacatgct gcagtttagca gaagagccag tgccacaggc tgggcaggag ctgaggggtgt420
ggcctccagg ggcccaggag ccctgcaccg tgaggccagc ccaggtggag ccactactgc480
ggctctgcct ccagcaggga cagctgtgtg agccgctccc atccctggca gagtctagag540
ccttgggccc gctgtccctg agccgactca gccctgagca caggcggctg cggagccctg600
cacagtacca ggtggtgctg tccgagaggc tgcaggccct ggtgaacagt ctgtgtgcgg660
ggcagtcccc ctgagactcg gagcggggct gactggaaac aacacgaatc actcactttt720
ccccacagga agaggagggtg agggaagagg gggggcg 757

```

(2) INFORMATION ON SEQ ID NO. 101:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1262 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

```

aatttgttga agagtgttgc tccctcatcc tctgcaaaca ttccataggg gataggaaga 60
actatgcctc tgccaagctt tctgagttgc tgccagaaga agttgaagca gaagtgaag 120
cagctgcaga gatatcaatg ggaacagagg tttcagaaga agatatttgc aatattctgc 180
atctttgcac ccaggtgatt gaaatctctg aatatcgaac ccagctctat gaatatctac 240
aaaatcgaat gatggccatt gcacccaatg ttacagtcac ggttggggaa ttagttggag 300
cacggcttat tgctcatgca ggttctcttt taaatttggc caagcatgca gcttctaccg 360
ttcagattct tggagctgaa aaggcacttt tcagagccct caaatctaga cgggataccc 420
ctaagtatgg tctcatttat catgcttcac tcgtgggcca gacaagtccc aaacacaaaag 480
gaaagatttc tcgaatgctg gcagccaaaa ccgttttggc tatccgttat gatgcttttg 540
gtgaggattc aagttctgca atgggagttg agaacagagc caaattagag gccaggttga 600
gaacttttga agacagaggg ataagaaaaa taagtggaa aggaaaaagca ttagcaaaaa 660
cagaaaaata tgaacacaaa agtgaagtga agacttacga tccttctggg gactccacac 720
ttccaacctg ttctaaaaaa cgcaaaatag aacaggtaga taaagaggat gaaattactg 780
aaaagaaaagc caaaaaagcc aagattaaag ttaaagttga agaagaggaa gaagaaaaag 840
tggcagaaga agaagaaaca tctgtgaaga agaagaagaa aaggggtaaa aagaaacaca 900
ttaaggaaga accactttct gaggaagaac catgtaccag cacagcaatt gctagtccag 960
agaaaaagaa gaaaaagaaa aaaaagagag agaacgagga ttaacagaaa ggaattacga 1020
ttatatcacc cggacacaca tcatgcttaa gattcaactg ggagcatacc agggatgctc 1080
tctaacgtaa tcaaggggaag gttcagtaag acaaagtgat ttatcatcta taacttcaa 1140
cctatttgtc ttgacatcaa ctctgttaac cttatgtcat catttcttag agtctttgat 1200
atacaaataa aattttcttt gtatttttaa acaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1262
aa

```

(2) INFORMATION ON SEQ ID NO. 102:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1281 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

```

ggcggaagta gccgcaggca tggcgggcggc tatgccgctg ttgctctgct cgtcctggtg 60
ctcctggggc ccggcgggctg gtgccttgca gaacccccac gcgacagcct gcgggaggaa 120
cttgtcatca ccccgctgcc ttccggggac gtagccgcca cattccagtt ccgcacgcgc 180
tgggattcgg agcttcagcg ggaaggagtg tccattaca ggctctttcc caaagccctg 240
gggcagctga tctccaagta ttctctacgg gagctgcacc tgctattcac acaaggcttt 300
tgaggagacc gatactgggg gccacccttc ctgcaggccc catcagggtg agagctgtgg 360
gtctgggttc aagacactgt cactgatgtg gataaatctt ggaaggagct cagtaatgtc 420
ctctcaggga tcttctgcgc ctctctcaac ttcctcgact ccaccaacac agtcaactccc 480
actgcctcct tcaaaccctt gggctctggc aatgacactg accactactt tctgcgctat 540
gctgtgctgc cgcgggaggt ggtctgcacc gaaaacctca cccctggaa gaagctcttg 600
ccctgtagtt ccaaggcagg cctctctgtg ctgctgaagg cagatcgctt gttccacacc 660
agctaccact ccaggcaggt gcatatccgc cctgtttgca gaaatgcacg ctgtactagc 720
atctcctggg agctgaggca gaccctgtca gttgtatttg atgccttcat cacggggcag 780
ggaaagaaaag actggtcctt cttccggatg ttctcccga cctcacgga gccctgcccc 840
ctggcttcag agagccgagt ctatgtggac atcaccacct acaaccagga caacgagaca 900
ttagaggtgc accaccccc gaccactaca tatcaggacg tcatcctagg cactcggaag 960
acctatgcca tctatgactt gcttgacacc gccatgatca acaactctcg aaacctcaac1020
atccagctca agtggaagag acccccagag aatgaggccc cccagtgcc cttcctgcat1080
gcccagcggt acgtgagtgg ctatgggctg cagaaggggg agctgagcac actgctgtac1140
aacacccacc cataccgggc cttcccggtg ctgctgctgg acaccgtacc ctggatatctg1200
cggctgttac atccactacc agcctgccca ggaccggctg caaccccacc tctggagat1260
gctgattcag ctgccggcca a

```

(2) INFORMATION ON SEQ ID NO. 103:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 716 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

```

gggccccaga aagagaccaa tgtgttgtgc gacgggtggg tggcagtggc agtggcagat 60
ggtaccaggc gccccagaac tctaaggggc ctcaagtagt ttaaaacctc ggaggctgcc120
tgacttgggg ccaagggttt ctatgctcag gcctgacccc tcatggatta gtttctgctg180
gaaaaacttt ttctgccctc ggccagggtct ctatctcctt ctgccttaac atattttgga240
aggttggttc ccagcagaga cggggccatg ggctcacact ctgacctctc ccacggcatt300
agccctgtct cagcctctgg gctgttacgc aagttaattc ctgcacaaga ctcaaacag360
ggctgtggag gaagcaaagg agcccttttt atgcctctgt agtaggactg agagaggccc420
tctggccagc gtgagcctgc tggttcttcc cggactgtac caggccttga ggcggggtat480
ggaaacgccc cactctgggg cctggcttgg ggaaggggag gcggcagggg ttctttgggc540
ttctcgaggg tataatctga gctctctggg gaacgtgtgt ccattttagt gcagtagtcc600
gacacgtcgg gggactcaac tttaactctg gacaatctgt gtgtggtctg tttttagtaa660
attcatccac acaagagagt ggaggcatga acagggttgg ccttcctcgg atctca 716

```

(2) INFORMATION ON SEQ ID NO. 104:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1160 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

```

tttgttgttg gagaaaggag agaaaggaaa gcgcgagggg ccgcccaccac caccagcgca 60
gagtcctgga gctgtgagga gattcggggc gtcaccctgc ctcccctgcg tcccgcacc 120
ggccgcttct gtccctcgga ccattccaac aatctcgtaa aacatggttg attactatga 180
agttctaggc gtgcagagac atgcctcacc cgaggatatt aaaaaggcat atcgaaact 240
ggcactgaag tggcatccag ataaaaatcc tgagaataaa gaagaagcag agagaaaatt 300
caagcaagta gcggaggcat atgaagtgtc gtcggatgct aagaaacggg acatctatga 360
caaatatggc aaagaaggat taaatggttg aggaggagg ggaagtcatt ttgacagtcc 420
atttgaattt ggcttcacat tccgtaaccc agatgatgtc ttcagggaat tttttggttg 480
aagggaacca ttttcatttg acttctttga agaccctttt gaggacttct ttgggaatcg 540
aaggggtccc cgaggaagca gaagccgagg gacggggtcg tttttctctg cgttcagtgg 600
atttccgtct tttggaagtg gattttcttc ttttgataca ggatttactt catttgggtc 660
actaggtcac gggggcctca cttcattctc ttccacgtca tttggtggtg gtggcatggg 720
caacttcaaa tcgatatcaa cttcaactaa aatggttaat ggcagaaaaa tcactacaaa 780
gagaattgtc gagaacggtc aagaaagagt agaagttgaa gaagatggcc agttaaagt 840
cttaacaata aatggtgttg ccgacgacga tgccctcgct gaggagcgca tgcggagagg 900
ccagaacgcc ctgccagccc agcctgccgg cctccgcccg ccgaagccgc cccggcctgc 960
ctcgctgctg agacacgcgc ctactgtct ctctgaggag gagggcgagc gagaccgacc1020
tggggcaccc gggccctggg accccctcgg cgtccgcagc aggattgaaa gaaggtggca1080
agaggaagaa gcagaagcag agagaggagt ttgaaggagg aaggaagttg gaccaaaggc1140
attgattaga ccggtttttt

```

1160

(2) INFORMATION ON SEQ ID NO. 105:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1040 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

```

agcatccgct tccggttccc agactgaatt gtcagtgagc ggagtctgag gtcgctgtgg 60
actgcccact gggccttgcc cgagatggac agccggattc cttatgatga ctaccggtg 120
gttttcttgc ctgcctatga gaatcctcca gcatggattc ctccatcatga gaggggtacac 180
caccgaggact acaacaatga gttgaccagc tttctgcccc gaaccatcac actgaagaag 240
cctcctggag ctgagttggg atttaacatc cgaggaggaa aggcctccca gctaggcatc 300
ttcatctcca aggtgattcc tgactctgat gcacatagag caggactgca ggaaggggac 360
caagttctag ctgtgaatga tgtggatttc caagatattg agcacagcaa ggctgttgag 420
atcctgaaga cagctcgtga aatcagcatg cgtgtgcgct tctttcccta caattatcat 480
cgccaaaaag agaggactgt gcaactagaa gttgcagccc acagcccttc atgtggactc 540
tgatcatgaca tgctaactag acttcagggg agccacttct gttttcagcc cctccctgga 600
atagtgaatt gggaggatgg ggagacagct aaccaactgc attaccctaaa ccattattgca 660
cttttagttc cctagttttc taggtgagct tcattccctg aaaggaggat gatgatattc 720
aggcataacc tagcctgtga ggaacctagt taggaaagac aactgacatt tattgaatat 780
catgcactag tcccttacat atgtcatatt ttaattatag aaatcagtag caaaaagaat 840
cttgggggatt ttccatctga cttccctggc catcttatcc catccttgca ctaccagaag 900
attcatacac ttttgagact ccagtgaagc gctgttttca ccccttctc ctcttagcct 960
ctctcccaaa aagtaaaaca caatgctgaa gaaaaaaaaa aaaaaaaaaa aaaaaggggg 1020
gggccggccg gtgggtggtc

```

(2) INFORMATION ON SEQ ID NO. 106:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1336 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

```

cgagggacag aacctggtgc aggaggagtt ggcgggccgc gggaccacgc ccccgctccat 60
ccgcaacggc ctggacaaag ccgcgaggtc cgcttcgagc gagctgagca ggccctgcgc 120
cgggttcagcc agggcccccac acccgctgcc gctgtccccc agggcacggc agccgagggc 180
gctcccaggc aggaaaactg tggtgcccag caggtccccc caggccgggc actagcaccc 240
ctcccagcag ccccggtgcg acctgcgggc ccctgacgga tgaggacgtg gtcaggctgc 300
ggccctgtga gaagaagcgg ctggacatcc gtggcaaact ttacctggcc cccctcacca 360
cgtgtgggaa cctgcccttc cgacggatct gcaagcgctt cggggcggat gtgacatgtg 420
gagagatggc cgtctgcacc aacctgctgc agggccagat gtccgagtgg gccctactca 480
aacgccacca gtgtgaggac atctttggcg tccagctgga gggcgccctc cccgacacca 540
tgaccaagtg tgccgagctg ctgagccgca ccgtggaggt ggactttgtg gacatcaacg 600
tcggctgccc catcgacctc gtgtacaaga aggggtgggg ctgtgccctc atgaatcgct 660
ccaccaagtt ccagcagatc gtccgtggca tgaaccaggt gctggatgtg ccgctgactg 720
tgaagatccg cacaggcgtc caggagcgtg tgaacctggc gcaccgcctg ctgcccgagc 780
tgccggactg gggcgtggca ctcgtcacgg aaatggggac atcttgtcat ttgaggatgc 840
caaccgcgcc atgcagactg gtgtcaccgg gatcatgatt gcccggtggc cctgctcaa 900
gccgtggctc ttcacggaga tcaaggagca gcggcactgg gacatctcgt cgtccgagcg 960
cctggacatc ctgcgggact tcaccaacta cggcctggag cactggggct cggacacgca 1020
gggcgtggag aagaccgggc gctttctgct cgagtggctg tccttcctgt gccggtacga 1080
tcccgtgggg ctgctggagc ggctcccaca gaggatcaac gagcggccgc cctactacct 1140
gggccgcgac tacctggaga cgctgatggc cagccagaag gcagccgact ggatccgcat 1200
cagcgagatg ctcttgggc cagtgcctcc cacctgcct tcttgccgaa gcacaaggcc 1260
aacgcgtaca agtagcctca ggctttccca ggggcaccct ggggcgagga gagtacaata 1320
aattttattc ttttaa

```

1336

(2) INFORMATION ON SEQ ID NO. 107:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 812 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

```

ggcagcccaa tgtctcctgc acgtgcaatg caaacgctct ttgttcaga gcatggagat 60
cacggagctg gagtttggtc agatcatcat catcgtggtg gtcacgtgcc tgctgagcca120
ctacaagctg tctgcacggt cttcatcag cgggcacagc caggggcgga ggagagaaga180
tgccctgtcc tcagaaggat gcctgtggcc tcggagacac agtgtcaggc aacggaatcc240
cagagccgca gtcttacgcc ccgcctcggc ccaccgaccg cctggccgtg cgcccttcgc300
ccagcggagc gttttccacc gttgccagcc caatgtctcc tgcacgtgca actgcaaacg360
ctctttgttc cagagcatgg agatcacgga gctggagttt gttcagatca tcatcatcgt420
ggtggtcacg tgccctgctga gccactacaa gctgtctgca cggtccttca tcagccggca480
cagccagggg cggaggagag aagatgccct gtcctcagaa ggatgcctgt ggccctcgga540
gagcacagtg tcaggcaacg gaatcccaga gccgcaggtc tacgccccgc ctcgccccac600
cgaccgctg gccgtgccgc ctttcgccc gcgggagcgc ttccaccgct tccagccccac660
ctatccgtac ctgcagcacg agatcgacct gccgcccacc atctcgctgt cagacgggga720
ggagcccca ccctaccagg gccctggac cttcaaggtt cgggaccccg aggaggagtt780
ggaaattgaa cggggattgg gtgcggagac cc                               812

```

(2) INFORMATION ON SEQ ID NO. 108:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 2681 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

gatgcttggt	atcatcatca	tgatgacgct	gtgtgaccag	gtggatattt	atgagtgcct	60
cccatccaag	cgcaagactg	acgtgtgcta	ctactaccag	aagttcttcg	atagtgcctg	120
cacgatgggt	gcctaccacc	cgctgctcta	tgagaagaat	ttggtgaagc	atctcaacca	180
gggcacagat	gaggacatct	acctgcttgg	aaaagccaca	ctgcctggct	tccggaccat	240
tcactgctaa	gcacaggctc	ctcactcttc	tccatcaggc	attaaatgaa	tggtctcttg	300
gccaccccag	cctgggaaga	acatttttct	gaacaattcc	agcctgctcc	ttttactcta	360
ggggcctctg	tcagcaagac	catggggact	tcaagagcct	gtggtcagga	aatcagggtc	420
agccttcctt	gtagccagac	agtttatgag	cccagagcct	cctgccacac	acatgcacac	480
atatctagca	ttctttccag	acagcatcct	ccccgccttc	caccttggtg	gatgcaagggt	540
ctatctctcc	catcagggtc	gccaaagctg	ggctttgttt	ttcccagcag	aatgatgcca	600
ttctcacaaa	ccaatgctct	atattgcttg	aagtctgcat	ctaaatattg	atttcacgtt	660
ttaaagaaat	tctcttaaat	tacaattgtg	cccaatgcag	ggtggctctg	gggggcaagt	720
aggtggtaca	ggggatttga	aacatgctcc	gcgcctccag	agaaaagttg	ctcccagagg	780
ccatgccccct	ggaacgtgtt	cctatcacctc	tggtctggtg	ggctggtcct	tagactgggt	840
gcttatgatt	aaaggggtctt	ggttagccca	ctttccctct	ccatgtggag	atggaaggta	900
gagaaggata	cagtgtctat	cctcaagttg	ctacggttca	gtgagagagg	cagacatctg	960
aacaggcagg	taggattcag	tgtgctcagt	gcactgggga	tttgagagaga	gatgggcttg	1020
ctctctctgt	gcacccaggga	gggccacgca	cttaaaactg	tgtttgtgga	tcagagaagg	1080
ctttatagca	cagggggcat	tcagatgagt	cttagaggaa	gagaagaaac	atggcaagca	1140
gattacatct	gagccgtttg	aattgtgttt	ttctttcttc	ccatgtttat	tttctaagat	1200
ctacctgaac	ttagagactc	aagatatttt	tttaggaaac	ctcctaccca	tgtctgaggt	1260
agcaagtgca	gcctcacgac	agataccagg	caatccagag	ccacaaaacg	tgattcctcc	1320
aggctctgcc	tggcctgacc	ctgtcctgtc	agctgggttt	acataccagt	cccattcttc	1380
cttttcaata	aataccccca	aatcttcttc	taaccaccat	taaagcattt	tttgctttaa	1440
aagcatcctg	accccaattt	ctttgagctc	acgggccttt	tgctgaagggt	ctctcagggt	1500
gtagtgggtg	ggctctctgg	acttaacgtc	actctcagag	gtcagaacct	tgagatcag	1560
aactgattct	caccagggtg	gagagggtgt	gtagcagatt	gcaatgctct	gcacctcttc	1620
cttgcaagtg	agcaacttca	ggctctctgg	gcagaggctg	gcccactgta	gtttgcagac	1680
atgctctcca	gatgggttta	ctaagtcccc	tctccctgat	agggaatcct	gctggaccag	1740
cgcagcctgg	gtgtggagag	gttaaaagac	ttgcacagga	tcaccaagtc	atgctgtaga	1800
gccaggattc	ctagacccag	ggctctgcac	tctcaagggt	ggccccatgt	gctcaagggg	1860
atctaattgt	tgggctccaa	actaaccatc	tcggagctgg	gctcctcatt	tactgccaaa	1920
ccctcagctt	atgtagctag	aaagggccct	ggagtgaaga	agcctggatt	ttcaaattga	1980
tgctccccta	ctgactagct	gtgccactct	gggcaaatgc	tcttccttga	gcctgtttcc	2040
acacctgtaa	agtggggatg	atgatcctat	ctcactgctt	ttgtgaggat	tacaggaaag	2100
cacctgtcct	ggctctgtac	ctggcacgta	gtagggtgct	agttcatgct	ggtttccttc	2160
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ggaggctagt	gtggaagagg	tcctgtcctc	agggaattaa	ctgtcttatt	gggagacaac	2280
aactgtcctc	cttggaacac	ccaagaaacc	atgcaaagca	gtggacaaca	cagaacacgc	2340
cctcctcctc	gctgcctgca	gctccaatct	gattctgctt	gggaatgggc	ggagcacgtg	2400
ggctgcttaa	ctgctgtata	ggacaagccc	cttacccttc	tctgggcccc	tgaattcctg	2460
gcttgggtta	tgttctgatt	tgacacactg	attttaatct	tcgaatcatg	acactgagtg	2520
cagaggagggt	ggcattccga	cagcaggaca	tacatgttgg	tgtgaagact	gggacgacac	2580
tgggtagaat	ctagttttta	attattatta	atataaagga	tcaaattaat	ttaaatatga	2640
atccgaagtc	cacagaactt	taagtgtctg	gccggccatg	t		2681

(2) INFORMATION ON SEQ ID NO. 109:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1407 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

cttgggacgg	aagcctagct	gggtgggggg	cgccgggctg	gagccttcgc	aggggagcgg	60
gctcagtcac	caccctgcgc	cccagagtga	ctcagccccc	acgtcccccac	ccatccccgg	120
ggagccagg	ccgcagagg	aggtagataa	gtgggggtgg	agcctgggtc	ggccagagag	180
ttcaggccac	cccggccgga	cgccctgccac	ttgctgtcac	tgtgccgctg	tcattggcacg	240
ctccgggagt	gccacgccac	ctgcccgggc	tccgggagcc	cctccacgga	gcccacccca	300
gaggctggta	caggatgtca	gtgggcccct	gagggagctg	cgccctcggc	tctgccacct	360
gcgaaaggga	cctcagggtc	atgggttcaa	cctgcatagt	gacaagtccc	ggcccggcca	420
gtacatccgc	tctgtggacc	cgggctcacc	tgccgcccgc	tctggcctcc	gcgcccagga	480
ccgggtcatt	gaggtgaacg	ggcagaatgt	ggagggactg	cgccatgctg	aggtgggtgg	540
cagcatcaag	gcacgggagg	acgaggcccc	gctgctggtc	gtggaccccc	agacagatga	600
acacttcaag	cggttccggg	tcacacccac	cgaggagcac	gtggaaggte	ctctgccgtc	660
acccgtcacc	aatggaacca	gccctgcccc	gctcaatggg	ggctctgcgt	gctcgtcccc	720
aagtgcacct	cctggttccg	acaaggacac	tgaggatggc	agtgcctgga	agcaagatcc	780
cttcaggag	agcggccctc	acctgagccc	cacggcggcc	gaggccaagg	agaaggctcg	840
agccatgca	gtcaacaagc	gcgcgccaca	gatggactgg	aacaggaagc	gtgaaatctt	900
cagcaacttc	tgagcccctt	cctgcctgtc	tccggaccct	gggacccctc	ccgcacggac	960
cttgggcctc	agcctgcccc	gagctcccc	agcctcagtg	gactggaggg	tggtcctgcc	1020
attgccca	aatcagcccc	agccccgggtg	agcccccatc	ctgcccctgc	ccaccaggta	1080
ctgggggcct	gtggcagcaa	gataggggga	gagagaccca	gagatgtgag	agagagtcag	1140
agacagagac	agagagagag	agagagagac	acagagagag	acagagagag	agcgagcgag	1200
cgcgcggcag	ccgcggggcg	agggcctttg	ctgctctgcc	ggggcctgct	gactgaaagg	1260
aatttggtt	tttgcttttt	ttccaaaaag	atctccagct	ccacacatgt	ttccacttaa	1320
taccagagac	cccccccgtc	aaagccccc	tccccggccc	cttgggacgc	gctctaaata	1380
attgcaataa	aacaaacctt	tctctgc				1407

(2) INFORMATION ON SEQ ID NO. 110:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1376 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

```

cgaagaagcc ccgccccgct ccgcttagac aatgccccgg agccgccaga ccgtcgcgcc 60
cctgccccat cgtagtatat gagctcgctt acacaaggac ccccgctaaa agccagagct 120
cccagtcctc gaggcttgaa gacggggact cccttctcca ccaactctgt cctcgggggg 180
tgggggcccca gccgagatca cagcgcgaca ggagtggggg tggccgctgg agacaggtga 240
agaaacaaga aaactaagaa atccgagcgg ttggaggggg agtctgtgtg gatgggatgg 300
ggacgcgcgg ggaggggctg ggccgctgct cccatgccct gatccgggga gtcccagaga 360
gcctggcgct gggggaaggt gcgggggctg gccttcccg ccttgatctg gccaaagctc 420
aaaggagagc cggggtgctg ggaggtaaac tgaggcaacg actggggcta cagctgctag 480
aactgccacc tgaggagtca ttgcgctgg gaccgctgct tggcgacacg gccgtgatcc 540
aaggggacac ggccctaata acgcgccctt ggagccccgc tcgtaggcca gaggtcgatg 600
gagtcgcaaa agccctgcaa gacctggggc tccgaattgt ggaaatagga gacgagaacg 660
cgacgctgga tggcactgac gttctcttca ccggccggga gttttctgta ggcctctcca 720
aatggaccaa tcaccgagga gctgagatcg tggcggaacac gttccgggac ttcgccgtct 780
ccactgtgcc agtctcgggt ccctcccaac tgcgcggtct ctgcggcatg gggggacctc 840
gcactgttgt ggcaggcagc agcgacgctg cccaaaaggc tgtccgggca atggcagtgc 900
tgacagatca cccatatgcc tcctgaccc tcccagatga cgcagctgct gactgtctct 960
ttcttcgtcc tgggttgctt ggtgtgcccc ctttctctct gcaccgtgga ggtggggatc 1020
tgcccaacag ccaggaggca ctgcagaagc tctctgatgt caccctggta cctgtgtcct 1080
gtcagaact ggagaaggct ggcgcggggc tcagctccct ctgcttggtg ctacgcacac 1140
gccccacag ctgagggcct ggccttgggg tactgtggc caggggtagg atagtatagg 1200
aagtagaagg ggaaggaggg ttagatagag aatgctgaat aggcagtagt tgggagagag 1260
cctcaatatt gggggagggg agagtgtagg gaaaaggatc cactgggtga atcctccctc 1320
tcagaaccaa taaaatagaa ttgacctttt aaaaaaaaaa aaaaaaaaaa agttct 1376

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(2) INFORMATION ON SEQ ID NO. 111:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 854 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

```

acgtatagtc gggtcgggctg gtggagtagc tcagagtagg gggagcgccg taattgacac 60
atctcttatt tgagaagtgt ctgttgccct cattaggttt aattacaaaa tttgatcacg120
atcatattgt agtctctcaa agtgctctag aaattgtcag tggtttacat gaagtggcca180
tgggtgtctg gagcaccctg aaactgtatc aaagttgtac atatttccaa acatttttaa240
aatgaaaagg cactctcgtg ttctcctcac tctgtgcact ttgctgttg tgtgacaagg300
catttaaaga tgtttctggc attttctttt tatttgtaag gtggtggtaa ctatggttat360
tggctagaaa tcctgagttt tcaactgtat atatctatag tttgtaaaaa gaacaaaaca420
accgagacaa acccttgatg ctccctgtgc ggcgttgagg ctgtggggaa gatgcctttt480
gggagaggct gtagctcagg gcgtgcactg tgaggctgga cctgttgact ctgcaggggg540

catccattta gcttcagggtt gtcttggttc tgtatatagt gacatagcat tctgctgcca600
tcttagctgt ggacaaaagg gggtcagctg gcatgagaat attttttttt ttaagtgcgg660
tagtttttaa actgtttggt ttaaacaaca ctatagaact cttcattgtc agcaaagcaa720
agagtcactg catcaatgaa agttcaagaa cctcctgtac ttaaacacga ttcgcaacgt780
tctgttattt tttttgtatg tttagaatgc tgaaatgttt ttgaagttaa ataaacagta840
ttacattttt aaaa

```

854

(2) INFORMATION ON SEQ ID NO. 112:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1681 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

```

ttcagctttt gccgaaatgg gtagtgatca cacacagtca tctgcaagca aaatctcaca 60
agatgtggac aaagaggatg agtttggtta cagctggaaa aatatcagag agcgttatgg 120
aaccctaaca ggcgagctgc atatgattga actggagaaa ggtcatagtg gtttgggcct 180
aagtcttgct gggaaacaaag accgatccag gatgagtgtc ttcatagtgg ggattgatcc 240
aaatggagct gcaggaaaag atgggtcgatt gcaaattgca gatgagcttc tagagatcaa 300
tggtcagatt ttatatggaa gaagtcacat gaatgcctca tcaatcatta aatgtgcccc 360
ttctaaagtg aaaataatth ttatcagaaa taaagatgca gtgaatcaga tggccgtatg 420
tcctggaaat gcagtagaac ctttgccttc taactcagaa aatcttcaaa ataaggagac 480
agagccaact gttactactt ctgatgcagc tgtggacctc agttcattta aaaatgtgca 540
acattctgga gcttcccaag gaggcagggg ggtttgggta ttgctatcag cgaagaagat 600
acactcagtg gagtcacatc aaagagctta acagagcatg gggtagcagc cacggatgga 660
cgactcaaag tcggagatca gatactggct gtagatgatg aaattgttgt tggttaccct 720
attgaaaagt ttattagcct tctgaagaca gcaaagatga cagtaaaact taccatccat 780
gctgagaatc cagattccca ggctgttcct tcagcagctg gtgcagccag tggagaaaaa 840
aagaacagct cccagtctct gatggtccca cagtctggct ccccagaacc ggagtccatc 900
cgaaatacaa gcagatcatc aacaccagca atttttgctt ctgatcctgc aacctgcccc 960
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cagagagtgc gcctgacact ctacagagat gagggcccat acaaagagga ggaagtgtgt1260
gacaccctca ctattgagct gcagaagaag ccgggaaaag gcctaggatt aagtattgtt1320
ggtaaaagaa acgatactgg agtatttgtg tcagacattg tcaaaggagg aattgcagat1380
gccgatggaa gactgatgca gggagaccag atattaatgg tgaatgggga agacgttcgt1440
aatgccaccc aagaagcggg tgccgtttgg ataaaagtgt ttccctaggg cacagttaac1500
cttgggaagt tgggaaggat tcaaagctgg gtcccgttcc gtttcaggag gagggagggc1560

cgtttttcaa aggcagccca gggttgagtt tgaaggggca gcctctttcg tcttttttca1620
cgtttttccc acttttttgg ggatccccgt ttacattttg agttccactt ggggaagtta1680
g

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1681

(2) INFORMATION ON SEQ ID NO. 113:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 852 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

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ggcaatttcc gttaggtgct gaaggctgtg ggcgcgggct gtccccattc ccacgtgaag 60
cgctacgcta gcatcgctcg gctggcggct cccagctcgc cgcggagcag tcccggcagc120
agcgggggac cggaagtggc tcgcggaggc tcagaagcta gtcccggagc ccggcgtgtg180
gcgcctcgga gcacgggtgac ggcgccatgt ccctaattct ctccatctct aacgaagtgc240
cggagcacc atgtgtatcc cctgtctcta atcatgttta tgagcggcgg ctcatcgaga300
agtacattgc ggagaatggt accgacccca tcaacaacca gcctctctcc gaggagcagc360
tcacgcacat caaagttgct cacccaatcc ggcccaagcc tccctcagcc accagcatcc420
cggccattct gaaagctttg caggatgagt gggatgcagt catgctgcac agcttcactc480
tgcgccagag ctgcagacaa cccgccaaga gctgtcacac gctctgtacc agcacgatgc540
cgctgcccgt gtcattgccc gtctcaccaa ggaaactgtg aaggggatgg gcaggagggc600
ttgtgcaggg ttttgtaagc agtgatctag tttcattaaa aaaagaaaac aataaaaaag660
ccctgcacaa ggccacagc ccctctccct tcctgtcggt caatggacgt ggtggtggct720
gttccacacc cattttgttg cagttcctgt gagacaggag aggctgagcc aagggaactg780
tgaaggggat gggcaggagg gcttgtgcag ggttttgtaa gcagtgatct agtttcatta840
aaaaaagaga ac

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852

(2) INFORMATION ON SEQ ID NO. 114:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1739 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

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gaagcccggg gcctggcgac gcgcacgcgg agcggagcgg cagcgcacgc gggcgatcgc 60
ttcacggatg cggacgacgt agccatcctt acctacgtga aggaaaatgc ccgctcgccc 120
agctccgtca ccggtaacgc cttgtggaaa gcgatggaga agagctcgct cacgcagcac 180
tcgtggcagt ccctgaagga ccgctacctc aagcacctgc ggggccagga gcataagtac 240
ctgctggggg acgcgcgggt gagccctcc tcccagaagc tcaagcggaa ggcggaggag 300
gacccgagg ccgcggatag cggggaacca cagaataaga gaactccaga tttgcctgaa 360
gaagagtatg tgaaggaaga aatccaggag aatgaagaag cagtcaaaaa gatgcttgtg 420
gaagccaccc gggagtttga ggaggttgtg gtggatgaga gccctcctga ttttgaaata 480
catataacta tgttgtatga tgatccaccc acacctgagg aagactcaga aacacagcct 540
gatgaggagg aagaagaaga agaagaaaaa gtttctcaac cagaggtggg agctgccatt 600
aagatcattc ggcagttaat ggagaagttt aacttggatc tatcaacagt tacacaggcc 660
ttcctaaaaa atagtgggtga gctggaggct actccgcct tcttagcgtc tggtcagaga 720
gctgatggat atcccatttg gtcccgacaa gatgacatag atttgcaaaa agatgatgag 780
gataccagag aggcatgttg caaaaaattt ggtgctcaga atgtagctcg gaggattgaa 840
tttcgaaaaga aataattggc aagataatga gaaaagaaaa aagtcatggg aggtgagggtg 900
gttaaaaaaa attgtgacca atgaacttta gagagttctt gcattggaac tggcacttat 960
tttctgacca tcgctgctgt tgctctgtga gtcctagatt tttgtagcca agcagagttg 1020
tagaggggga taaaagaaa agaaattgga tgtatttaca gctgtccttg aacaagtatc 1080
aatgtgttta tgaaaggaag atctaaatca gacaggagtt ggtctacata gtagtaatcc 1140
attgttgga tggaaccctt gctatagtag tgacaaagtg aaaggaaatt taggaggcat 1200
aggccatttc aggcagcata agtaatctcc tgtcctttgg cagaagctcc tttagattgg 1260
gatagattcc aaataaagaa tctagaaata ggagaagatt taattatgag gccttgaaca 1320
cggattatcc ccaaaccctt gtcatttccc ccagtgagct ctgatttcta gactgctttg 1380
aaaatgctgt attcattttg ctaacttagt atttggttac cctgctcttt ggctgttctt 1440
tttttgagc ccttctcagt caagtctgcc ggatgtcttt ctttacctac ccctcagttt 1500
tccttaaaac gcgcacacaa ctctagagag tgttaagaat aatgttactt ggttaatgtg 1560
ttattttatt agtattgttt gtgctaagca ttgtgttaga tttaaaaaat tagtggattg 1620
actccacttt gttgtgttgt tttcattgtt gaaaataaat ataactttgt attcgaaaaa 1680
aaaaaaaaaa aaaaaaaaaa gaggagaaaa agaggggaaa gggggaagag gagcaaga 1739

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(2) INFORMATION ON SEQ ID NO. 115:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 805 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

```

ataggcgcac cccaagggtca gggtcacctc gagcctccag acaactgcgt caccttgacg 60
accaactgaa aaaaccggaa gggatggaag cagcggatca tctcgcgata tctggagcgt120
ctgcgcctgc cttcctgacc tgggacttgt ttccagctct cgcgagactt tcaggggtcg180
gagcgcgggg gcccgccgag aggaaagctg gaggcgcggg tggggaacat gtctgagtcg240
gagctcggca ggaagtggga ccggtgtctg gcggatgcgg tcgtgaagat agaatcctgg300
taattgatgt ccacccgaga aatccctgca gatgttccag cctctgtcta gtccagatag360
ccacaggaag ggtactggtt ttggattagg aattgttttc tcacttacct tctttaaaag420
aagaatgtgg ccattagcct tcggttcttg catgggatta ggaatggctt attccaactg480
tcagcatgat ttccaggctc catatcttct acatggaaaa tatgtcaaag agcaggagca540
gtgacttcac ctgagaacat cccagcggga ggacaagaga aatcatgttt attcctcagg600
aatactgaag tgccctggag taagctgcc aattctctgta acaatgttat cagtaatgct660
ttaaactcca gcacctgggt atgcatttga aaccaagtct gtttcttgtt ttgtattttc720
tctctggaag ttgtaaggag gtggtcttaa ataaattaaa caaaaatagg aagtccaaaa780
aaaaaaaaa aaaaaaaaaa aaaaaa

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805

(2) INFORMATION ON SEQ ID NO. 116:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1483 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

tgaaaaagac	ccaacgccaa	cacctggtgc	cttttgacgc	cagcgccac	ccatccgtgc	60
ccggaccctt	gggaatgcc	gcggctccag	aggaaaaagc	ccagggacgg	ggcctccgtt	120
gcgggggggc	ggctgcttct	tgggaacttt	gtcgtttccg	gcgctggctg	gctggctggc	180
tgtaaagcac	tgaagcccc	cgcccgccaa	cccctgaaag	cagaacctgg	cctccctggc	240
cacagcagcc	ttaccacccg	ctctacgtgt	cccgggcact	tcccgcagcc	ttcccgctcc	300
tttctcatcg	gccttgtagt	tgtacagtgc	tgttggtttg	aaaagggtgat	gtgtggggag	360
tgcggtcat	cactgagtag	agaggtagaa	tttctattta	accagacctg	tagtagtatt	420
accaatccag	ttcaattaa	gtgatttttt	gtaattatta	ttattttggt	gggacaatct	480
ttaattttct	aaagatagca	ctaaccatcag	ctcattagcc	acctgtgcct	gtccccgcct	540
tggcccggct	ggatgaagcg	gcttccccgc	agggccccca	cttcccagtg	gctgcttctt	600
ggggacccag	ggcacccccg	caccttcagg	cacgctcctc	agctggtcac	ctcccggctt	660
tgccgttcag	atggggctcc	tgaggctcag	gagtgaagat	gccacagagc	cgggctcccc	720
taggctgcgt	cgggcatgct	tgggaagctg	cctgccagga	ccttccaccc	tggggcctgt	780
gtcagccgcc	ggccctccgc	accctggaag	cacacggcct	ctgggaagga	cagccctgac	840
cttcggtttt	ccgagcacgg	tgtttcccaa	gaattctggg	ctggcggcct	ggtggcagtg	900
ctggagatga	ccccgagccc	ctccccgtgg	ggcacccagg	agggccctgc	cggaatgtgc	960
agcctgtggg	tagtcggctg	gtgtccctgt	cgtggagctg	gggtgcgtga	tctggtgctc	1020
gtccacgcag	gtgtgtggtg	taaacatgta	tgtgctgtac	agagagacgc	gtgtggagag	1080
agccgcacac	cagcgccacc	caggaaaggc	ggagcggtta	ccagtgtttt	gtgtttattt	1140
ttaatcaaga	cgtttcccct	gttttccctat	aaatttgctt	cgtgtaagca	agtacataag	1200
gaccctcctt	tggtgaaatc	cgggttcgaa	tgaatatctc	aaggcaggag	atgcattctat	1260
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gggacgcata	gctaatactt	tagagaggat	gacagatcca	taaagagagt	aaagataaga	1380
gaaaatgtct	aaagcatctg	gaaaggtaaa	aaaaaaaaaa	tctatttttg	gacaaatgta	1440
attttatccc	ccatgggatg	cttgggtatg	gcggggggga	ggc		1483

(2) INFORMATION ON SEQ ID NO. 117:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1347 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

tgaggctcttc	catgactgca	agtgttatat	tggactggat	ggtcatgaag	tccctttcat	60
agccagagat	tttgtgtggc	tgctaaaatg	cttacatctc	tggtatgaa	agggacttca	120
tgaccatcca	gtccaatata	acacttgcag	acagagaaac	tgaggctcttc	catgacttgc	180
ctagtctccc	agctagtttg	aggcaaaact	ggattccac	tctggtattc	tttcttccct	240
ttacatcatt	ttccctcctt	tataatgtcc	tgagagacca	gaactcacac	cagaatcgat	300
tattcctcag	gtgaagcata	gactctttca	tggtagacag	atttcacgac	tcagagatag	360
aaatctcttg	ctatcatcag	gtcacgggca	gctcctgtgg	agtcctgccc	aacttatgtg	420
gcttccataa	aatggcaaca	gtccaggctc	cttgccctaat	tttagagcat	taactcccta	480
attgccagta	agcaaggagg	tggtatctctg	caaacctaca	ctgtctatga	cagctctagt	540
tgtacttggg	gtgactaaat	acctcaaagg	caacctgctt	ctgcagggtt	tgaagtgtca	600
gcttcataag	acactgaggt	ttagaattgt	ttgattctag	accataactg	aagggcataa	660
atggaaaacag	gatatgaagg	gaaacaagta	gcatcatgga	gctgaaaagt	ggtgcatcac	720
ccaatggcta	gcacaaacaa	ggatcacact	gtccattctc	ttgtctgcta	aattaagcat	780
tttcttgcct	cctttgcttc	atctttttcac	aacagctgga	tagagggatc	agaaatgact	840
gtgtcatggg	gctcattcac	tgcaaactcc	cagttgcaag	ctccttggct	cccccgagg	900
gagcaagaat	ctcatagttc	agagacacag	agggcctttt	agccctaagt	accttttggg	960
tgggactgca	actcatgact	atcctgatat	tggaagaaag	gactttgtta	atcttctccc	1020
ccatagctct	gctgcgtagg	tctacatctt	actcagaatc	actacacatt	cctttagtct	1080
tcctccaagc	tccagagcca	ttggtacaaa	tgctttattg	aaactaaata	cataatacac	1140
acaatgagat	gaagacaata	tagaagtccg	catagtcac	ataatcccgt	tccttgcccg	1200
gttgaggcag	ctcagtggct	gagcccagtc	aagccaacc	gcagcttcac	tcacgacttc	1260
aagatttgat	gctaattctt	ttggatttct	acagttatta	aataagtgtc	tgagtggaaa	1320
aaaaaaaaaa	aaaaaaaaaa	aaaaaat				1347

(2) INFORMATION ON SEQ ID NO. 118:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1683 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

```

aattcggcac gatgggggga atctccgacc cgcacaccct acacatctgg aagaccaaca 60
gccttcctct ccggttcttg gtgaacatcc tgaagaaccc ccagtttgtc tttgacatcg 120
acaagacaga ccacatcgac gcctgccttt cagtcacgcg gcaggccttc atcgacgcct 180
gctccatctc tgacctgcag ctgggcaagg attcgccaac caacaagctc ctctacgcca 240
aggagattcc tgagtaccgg aagatcgtgc agcgctacta caagcagatc caggacatga 300
cgccgctcag cgagcaagag atgaatgccc atctggccga ggagtcgagg aaataccaga 360
atgagttcaa caccaatgtg gccatggcag agatttataa gtacgccaag aggtatcggc 420
cgcagatcat ggccgcgctg gaggccaacc ccacggcccg gaggacacaa ctgcagcaca 480
agtttgagca ggtggtggct ttgatggagg acaacatcta cagtgctac agtgaggcct 540
gagacacatg gagagttggt caggctgctg ctgggagaaa tggacgcca ctgggcctca 600
acttgatctt ctaccccgct cctgtgactc agactgggaa atactgagca gagacggctg 660
gggcgggggc aggaggagg gctgctctct gagacagggg cgcccccgcc ttgacccttg 720
ggcacctcca tcccctccca cctgtcccca gatcagctct tgggatggag gccagagagc 780
tggtcaggct ccccatctg cccagcacgg cctgcaactg gccacccac ttgctccaca 840
acgtccagtt ggtcctgctg ccaagagccc cgtgcatcca ggccggccaag cacaaactgg 900
gggagaggag gccgccagcc cggaggctgc agcccagaaa ctctacctca tccacactgg 960
tgcagggagc cctccttgaa ctgacctttg attggtttct gcttcaacta ccaaatgtt1020
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gatttttggt gcttgggagg ctgttggtag agtgggcagt gcccgcgcca tggggtgctc1140
tgtgggcttc tccaggagca gggagggtgg aggggagga tggggggcac aggagctggg1200
agccccgtct ccaggaaaag gagaggggtt aagatgcacc gaggtgtag ctgggctact1260
tgatcttgct gaaagtgtt ctaaagatag caccactttt ttttttaaag cttttatata1320
ttaaaaaacg tatcatgcac caactgtgaa tagctgccgc ttgcgcagag gaccggggga1380
ggggtcccga gaggtcctcc atgcaacact ggaaatgact gttccagaga gcgggcagac1440
ctggcagagc gccctggcg cctgagacta ccaccactc cgttcctgcc agaaacgacc1500
ctctgtggcc gatgggccat gcgggcccct cgcagccaac tcagccagtg ttgggactgg1560
ctcagagccc atgggggctg gaggggggca gctgggactc tgggaatcttc ttataataa1620
aagccttacg gacaaacctt aaaaaaaaaa aacaagacaa gagagggaaa gggaaagaag1680
ggg

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1683

(2) INFORMATION ON SEQ ID NO. 119:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1355 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

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acaagcatgg aagctttact gtttcggctc ttcaaacttc cagcaactac actgcggtgc 60
atcggacttc gacgcccgt ggtgacgcac acgctgcgcc ggaagtgtga acacaaagcc 120
tccaggcttt gtcattggcg ctgctgctgc acgctggaac catgtgtggg tcggcaccga 180
gactgggata ttgaaagggg taaatcttca gcgaaaacag gcggcgaaact tcacggcccg 240
aggacagccg cggcgcgagg aggcagtga cgcctgtgt tggggcaccg gcggcgagac 300
ccagatgctg gtgggctgcg cggacaggac ggtgaagcac ttcagcaccg aggatggcat 360
attccagggt cagagacact gcccgggcgg ggagggcatg ttccgtggcc tcgcccaggc 420
cgacggcacc ctcatcacat gtgtggattc tgggattctc agagtctggc atgacaagga 480
caaggacaca tcctctgacc cactcctgga actgagagtg ggccctgggg tgtgtaggat 540
gcgccaagac ccagcacacc cccatgtggt tgccacaggt gggaaagaga atgctttgaa 600
gatatgggac ctgcagggtt ctgaggaacc tgtgttcagg gccagaacg tcggaatga 660
ctggctggac ttgcgggttc ccactctgga ccaggacata cagtttctcc caggatcaca 720
gaagcttgtc acctgcacag ggtaccacca ggtccgtgtt tatgatccag catcccccca 780
gcgcccggca gtccctagaga ccacctatgg agagtacca ctaacagcca tgaccctcac 840
tccgggaggg aactcagtga ttgtgggaaa cactcatggg cagctggcag aaattgacct 900
tcggcaaggg cgtctactgg gctgtctgaa ggggctggca ggcagtgtgc gtgggttgca 960
gtgccaccct tcaaagcctc tactagcctc ctgtggcttg gacagagtct tgaggataca 1020
caggatccag aatccacggg gtctggagca taaggtttat ctcaagtctc aattgaactg 1080
cctcctcttg tcaggcaggg acaactggga ggatgagccc caagagcctc aagaacccaal 1140
caaggtgccc ctagaagaca cagagacaga tgaactttgg gcacaccttg aggcagctgc 1200
caagcgggaag ctctcgggtt tggagcagcc ccaaggagct ctccaaacga gacggagaaa 1260
gaagaagcgg cctgggtcca ccagcccctg acgcccctgt gccactttg taaataaaact 1320
gctgaacacc caaaaaaaaaa gaaaaaaaaa agggg

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1355

(2) INFORMATION ON SEQ ID NO. 120:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1816 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

```

ggtcagagag attctgaaaa gtaatccaaa gtgttcgcta gctaaacatg gtgcaggctc 60
gttgtaaccac tgcaaccgac tgacgttact gtagttccta gaatgctgtg agggcggggg 120
gttcagatca acataaagcc taacttgetg gagttgtagt ctcaaggctt tctctcttgc 180
ttaactaaaa cctaaggacc actgtttttg gtagcaatta tatggttact atccactgca 240
gtcctcagtt gttggggtaa atcccacatg gcagagtaag gcacccacaca gaaattaact 300
tgagagagcct gagaaattcc cagtggcctt ggcataagctg tctagaacac catctctagg 360
aaaatttaat tctgtccctg gccagctatt gttcttccac ttcgttttct gctgtcccaa 420
ggccagatga gtggaatcac catctgactg ttgtcaataa aatgtatctg gcgtgaacag 480
caggataacc catgtttctcc acataaggat aaccttaactg gaaaccttcc tgctgacaac 540
catgcagagg aattttttcca cttaagtcag agccttccctc cccatctgga attcacagct 600
gttccctggc agcacacagg aggtatttaa ttccatcata attcagttctc ttcttattct 720
cacctctttg gggaagttac gatttttttt ttccatcata attcagttctc ttcttattct 720
acagtgtgca ctttatgcct ctgccttttt gataatagtt gttcagtga ggaagtcagc 780
tgccagaata ttaagaaggg tctcccttta tgtcagtaca actgttaggg cggccttccc 840
atttacttta ggtttcaaga ggattcaccg gaagcacatg ccccggtcta gtcccatttg 900
aaacagttct gctttactga gaccctaggc cggctctcctt gctgacccta gcgtgctgc 960
ctaggtgcca tttcctttcc tctcagtc aatacaggct gcacattttg tcaactaatg 1020
ccagtacaat ctgtgttact cctaaggact tttgggattt tgatgagacc tgcgaggagg 1080
aagacactga gaagccagtg atctgcaagc atttgctctt gtttccacat cacctctggg 1140
atatttcagc tgttgtttcc aaatggcaaa tcatcaacta aaagcacttg tttcaagttt 1200
tgttctgcac tcccagact gaagttgtag attgagctga ataaccatgg gaagtgacca 1260
agcaaagaca ctcgattgga gtcagttgaa tattgtacc ctcagtggag ccttctggtt 1320
cttttcttcc acttctgcag aatttcctct agcaaatact tctttctcct tgcttccctc 1380
caccatgata tttgaataag agatggccag aggataacac ttgtctctta aaaactaagc 1440
taaaaagaac ctagaacctt caattgagca gttgtgaaaa ttgctaattg tgccaaggcc 1500
aagcaaagag tttcagaaaa tgactgagaa ggagcgataa cccccagaat gcaaaatcag 1560
gggcattcatt atccggtgct tgaacaagga gctccgctct acaactgggt ttttaggac 1620
ttgtgaggaa cacagcaacg gaaatccatc caciaaggat gcagtgcctc aacttgta 1680
gcgcctgaat agtcatgtga taatttactg aagaaatcta gtgtacttta aatttttttc 1740
ataaaagttt acattgtatt gtaggttaac attaaatgtt ttatagcaaa aacttcaaaa 1800
aaaaaaaaaa aaaaaa

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1816

(2) INFORMATION ON SEQ ID NO. 123:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 740 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

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tttagaattc agcatagggt gaggtcagaa agcaattcag gcatgagcca ccgtgcccg 60
cttcacaccc atttctttaa aaaggatccc gtagcaggca gaaaagcccc ttccatcctg120
ctcctctgat actgtgcccc cttggagata ttccgctcct ccaccacagt gtctgtggct180
ggaactgccc agcctgctcc tggccccctg gaagcctccc cacagctggt aatctggact240
taaggattgc tgggccaccg cctctctgcc taccaccatt ccatatttaa gtggagcccc300
tacgtagaaa ggccccgggg ctttatttta gtctcctttt cagggatgtc gtgggcgggg360
gaggggggttc ttggtgctac agccctctcc ccacccttaa agggacgccg acgctgtttg420
ctgccttcac cacatattag tgcttgaccc tggcagggga ccccatggaa aagatgggga480
agagcaaaat acatggagac gacgcaccct ccaggatgct cgctgggatt cccacgcccc540
ccactgtccc ccaccctatg gctgggaggg gcctctgaac ggaacagtgt cccacagag600
cgaataaagc caaggcttct tccccaaaaa aaaaaaaaaa aaaaaaaaaa aagataggtt660
agttaaggcg gccgaaagtt tttttccctt tagtaagggt tagtttttag tttgggggtt720
gccttcgttt ttaagaacgt

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740

(2) INFORMATION ON SEQ ID NO. 124:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1493 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

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aacacctgcc ctggttcagc gcttttaggga gggcggtctca ggcgccccgg agcaggcaga 60
gtgctgtggag ctgctgctgg ccctggggcga gcctgctggag gagctgtgcg aggagttcct 120
ggcgcacgcc cgcggccggc tggagaagga gctgagaaac ctggaggccg agctggggcc 180
ctcacctccg gctcccagc tgtagagtt caccgacct ggaggcagt gcttcgtggg 240
cggcctctgc caggtggcgg cggcctacca ggagctgttt gcggcccagg gccagcagg 300
tgccgagaag ctggcggcct tcgcccggca gctgggcagc cgctattttg cgctggtgga 360
gcgcggtgtg gcgcaggagc aggggtgttg tgacaactca ctgctggtgc gggcgctgga 420
ccgcttccac cggcgcttgc gggctcccgg ggccctgctg gccgctgccg ggctcgaga 480
cgctgccacg gagatcgtgg aacgagtggc ccgcgagcgc ctgggccacc acctgcaggg 540
tctccggggc gccttcctgg gctgcctgac agacgtccgc caggcgctgg cagcacctcg 600
cgtggctggg aaggagggcc ctggcctggc cgagttgctg gccaatgtgg ccagctccat 660
cctgagccac attaaggcct ctctggcagc agtgcacct ttcaccgcca aagaggtgtc 720
cttctccaac aagccctact tccggggtga gttctgcagt cagggtgtcc gtgagggcct 780
catcgtgggc ttcgtccact ctatgtgcca gacggctcag agcttctgcg acagccctgg 840
ggagaagggg ggtgccacac cacctgccct gctcctgctg ctctcccgcc tctgcctgga 900
ctacgagacg gccaccatct cctacatcct cactctcact gatgaacagt ttctggtgca 960
ggatcagttc ccagtgcgc ccgtgagcac gctgtgtgca gaggccaggg aaacggcgcg 1020
gcggtctgtg acccactacg tgaagggtga gggcctggtc atatcacaga tgctgcgcaa 1080
gagcgtggag actcgcgact ggctcagcac tctggagccc cggaatgtgc gggccgtcat 1140
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ctctcggcag cagggccgct acgccccag ctatacccc agtgccccga tggacaccaal 1320
cctcttgagc aatatccaga agctattctc tgaacgtatt gatgtgttca gccctgtgga 1380
gttcaacaag gtgtcggtgc tgaccggcat catcaagatc agcctgaaga cgcttgctgg 1440
gagtgtgtgc gggctgcgaa cctttttggc cctttgcggg cttcaacaag ggg 1493

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(2) INFORMATION ON SEQ ID NO. 125:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 250 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

```
ccagactgaa ttgtcagtga gcggatctga gggcggtgtg gaggggccag tggggccttg 60
ccgagatgga caaccggatt cttatgatg actagccggt ggtttcttgc ctgcctatga120
gaatcctcca gcatggaatc ctctcatga gagggtagac agccggacta caacgatgag180
ttgaccaggt tttggcccga accatcacac tgaagaagcc tcctggagtc attgggatta240
agatcgaggg                                     250
```

(2) INFORMATION ON SEQ ID NO. 126:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

```

tcgggggggag cggcgcgggcg gcgcggggagt tggttctaaa gagtggtgag tcagaagaga 60
cgtcaggcag caagcgactt gggccatggc ctctgacctt gacttctcac ctccggaggt 120
gcccagagccc actttccttg agaacctgct acggtacgga ctcttccttg gagccatctt 180
ccagctcatc tgtgtgctgg ccatcatcgt acccattccc aagtcccacg aggcggaggc 240
tgaaccgtct gagcccagaa gtgctgaggt gacgaggaag cccaaggctg ctgttccttc 300
tgtgaacaag aggcccaaga aagagactaa gaagaagcgg tagaagagga ggcctgagga 360
gctgggaggag caggagagag gtcttgggga cagccctcct gggaatctac attgtgttcc 420
cccgcattcc aggtcagagg tctgaggagg ctgtgacgcc ctatgaccgc agagatctag 480
acagtcgtaa cagtccccag gctccagctg ggcaatccac cacttcctct tccttctgct 540
tctgtgacgg tttagagtca agggggctga aacacactgt gagcatagac tgtattaggt 600
ttgttcagaa gccgggtcag ctcacagagt cacattttct tgcttagtca tgtgtccctc 660
cttgagttgc cccctccttg tgggtttaca ctacattttg gagtcattgt ctaatgctga 720
caagcacacc ctctcccatt atttgtgcac tacagatctc ctgctgatca gtcacctttg 780
ttgctgctgt gtagacagag ccaggcctca cctgtttgtt taggccaaga tgccatggac 840
atgcagcggt agtgatccca ctagctgtga cagccaggcc cagaaaatgc ctggcgtgag 900
agccagcaga cagccaggcc aggggtaggc agtgccctgct tctgctccat caggtgcagg 960
ggatttggct gaaggcgtgc atatttcttg ggcacaaact tcctgagcct ctgaaatggg 1020
aggctcgtca atttcagacc aacctctttt caacccatca tagcacgttc aaggtgtgcc 1080
ttttacttct acctgtacat ccccatcccc ttcaattctt tcattccctg accagtga 1140
gggttccttg gggaagtatg gtgaataaac tgacatgcat gcttcagaaa aaaaaaaaaa 1200
aa

```

1202

(2) INFORMATION ON SEQ ID NO. 127:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1014 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

```

cccttttttt ttctttttga gatgggggga aagtcctagc aaaaggcagg agttagcatt 60
ttccttttaac aagactttct aatgctaaac aaagaccaac ttctttttaa aggggttggt 120
ttggttggtg gtgaaaaata ctgtactgta atgatctgct tggtttttaa gcaaaagaga 180
tcctgacatg tgaaaccaat acaccaaaat gccaaagtcca caaatgaaca aaacaagtgc 240
ttaaaaaaaaa aattcttctg ctcttatatt ttggaggaa gctgctgatt ttggctgtca 300
gatttcactt agaaatggtc actttctgag atgctttttc ctcacagaat ctgtagataa 360
actcattaaa agattgtccc atttcaaaat caccccaag tctagcagca ctgttttttt 420
tttttttagt tttgttttta aaattacaaa ccaagtaaga agtccaacat cctcttccat 480
gaacagcttt gtgacagagc tcctgagtgt gtgcagcccc cactgtgctc tgaatacagt 540
ctctgcagct ccagtgtgtc ctcttttcag gaaggaaagc atattcaata cattcactat 600
ctgtaccccc tggaacttgc acatgctgac gagctattat aagccaactc atccccagct 660
ctcttccggg actggtcacc ccttgtaaaa ccattctgta taagttctct ttgaaatttc 720
tgatcttgag cagcatattc agaaagttca gattccaccg cgggaggagg aatgtttgga 780
ataaatttag aaaatagagt tggagccatc tgaaccactc ctggtctgag ggtatacagg 840
cctttcacaa tatttgccat agttgaaggt gtgacctgaa atggtgttga ctgggcttct 900
aaaagtaaag gcattaggcc gtaaatgtgc ttttctgcaa catgttccgt aaacagcttt 960
ataagggcac cttaagccc gggtaagctg gtccatggga acctatcggt ttg 1014

```

(2) INFORMATION ON SEQ ID NO. 128:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1171 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

```

caccaaatta atcagggttta cagacagggt cccaccggta ttcacattct tgttagtgat 60
cagatgggttc agaattttca agatgagagt tgttttttat tctccacagt aaaagctgaa 120
agtagtgatg gcatccacat aattttgaaa tgatgtctta tatagactga actgtattca 180
gtaccaaata gtcacgctta aaagtgtgtg aagactgaat ccaagaagtc ttgggattgg 240
athttaccat atgaaatgtt tcatattgaa aacacaagat gacctttcta atgagctgta 300
tgagagggtga atctcctcac tgtcactgcc atagccaagc atcctcatga gagtgagcac 360
atcggcacag catgcatcca gctctggagg ccacggtgca ggcatagctg cctgctgctc 420
tggcagaggc cagtaaatac agttcctaga agcagccttt gctgtctttt tacactgtat 480
gcggttttga aatgaatgta gaaacttact gtgggcattt acctttctgt gccagtttgg 540
cttttattgc ctgaacctta tgctgacctg gagaggagat gggggacagt gctgttgtgg 600
ggccagcagt gaatctgtat gcggagagtt gtgttgtgct gatgtggccg ttggtggtca 660
ggtaagaggc tcggcacctt cttggaagaa atcatgtctg aggggtgtacg tttgatatga 720
tcatgccaga ttggagaaga tccaagccag gaagatgggc ttgaagcaaa ctgcattatc 780
aggagtacct tgggtgagagg atcagtgtaa atcctaatag gtacaaagac ttttgtgttt 840
tggtttgtgc acagatttat tgaaaaactt ttttgcttct gcttccattt ttagcatttt 900
agtttctggt tttcattttt ggagattcct tgccctttta actcgtggtt tttctctcat 960
tttcttccct ctctccctcc atctctgacc acccccaccc taacccccca cccccaccat 1020
cctattaaac attttttaag ccctacccca gacattggga aatagggtga cccaagtagg 1080
gggggaggaa agtattgatt tgtttgata ggcttgtgga ttaggggtgt aaggggttct 1140
tggtattatg aacaaggtgg aattttttt g 1171

```

(2) INFORMATION ON SEQ ID NO. 129:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 353 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

```

ggccgggacg cagggcaaaag cgagccatgg ctgtctacgt cgggatgctg cgcctgggga 60
ggctgtgcgc cgggagctcg ggggtgctgg gggcccgggc cgccctctct cggagttggc 120
aggaagccag gttgcagggt gtccgcttcc tcagttccag agagggtgat cgcattgtct 180
ccacgccccat cggaggcctc agctacgttc aggggtgcac caaaaagcat cttacagca 240
agactgtggg ccagtgcctg gagaccacag cacagagggt ccagaacga gaggccttgg 300
tcgtcctcca tgaagacgtc aggttgacct ttgcccaact caaggaggag tgg 353

```

(2) INFORMATION ON SEQ ID NO. 130:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 205 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

```

cggctgagcg gccccgcagc caacccccga ggagcggccg gctggcgtgc cgctggcgcc 60
caggagttgg ggatgtccta caaacccatg cgcccctggc tgcccagcag cacccttg120
tctgccaggc accccttggg gcccggggca ccccggttcc ctgacaggga ggcgtgcgcg180
tgcgccgtgc ggggctgcag tgtcc
                                     205

```

(2) INFORMATION ON SEQ ID NO. 131:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 211 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

```

aatcacctt acaaccatt tctcagaaca tgtttctatt gttaaacaac acacaactat 60
tttatttatg tgttttattt atgcctgata accaatatca ataactgaaa cacagcagtt120
tagtaataat ttaatacaca ccataacctg cctattgaga atggcattat atttgttttc180
attgtagtgg ctccatccaa aataaaatga t                               211

```

(2) INFORMATION ON SEQ ID NO. 132:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 867 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

```

gtcttcccaa gatggagatg ctaacgaaac tgagaagggg gcgtatgttt gacgaaggtt 60
tgtgcaagtc aggcccttct ggaacacagc agggcctaca acgagggggcc tttgcatgg120
gctgtgagga tgggggtggt gggaagaatt ggccacgtta gagaccccat gccacccac180
catggtgagt gctctgtgcc tctgtctcac ctgtggtgag tgggcgagct gggcgagctg240
ggcgagctgg gctggggaga gcctgtgagg accgagagga gaaatgagaa gaaggaacaa300
aaatattatt tctatgtaat ttatatTTTA cttatgccaa attatttatg ataatttgcc360
attgctatac tgtaccagtg tcaaattgctg cagcctgcc aagctgtgatt ttgtgaggct420
tgtccctatg taggatgcac cgcaggcccc tggccactga aagagtgtgc agtggactgt480
gggtctccca tatgcggtgc cgcccaaagg tggctttgcc tcaagcaacc taccctgatg540
ttttactcat tggaaatgtt ttccccgatt gtggatgact tcttttctga tggagagagt600
ccaggaggga tggaaaacgc ctggatttaa gctcagcatc cccacatgg gcttttcgat660
catcttcagg cctgaagctg cacgacctga agttcgctg catttatcag ccctctttgt720
gctgctcctt gccaccttgg ggttcctgct ggggaccatg tgtggttgtg gcatgtgtga780
gcagaaggga ggatgaggaa aaaagagaag gaaacccccg ttagtgacaa gtgttttttt840
gagttgccag gttttgccat cattaaa                               867

```

(2) INFORMATION ON SEQ ID NO. 133:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 257 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

```

aattcagact cccattctta acttggcatt tttgtagctt acaggaacca gcttggtgta 60
ccttctctta tgagatgcag ctggaaagcc atttatgcaa gaggtggttt cacttttgtc120
gctcctccat tcattgacct ttcagccttt aaaaaattag aatgtgaaaa ttagtagcaal80
agagtgcaga gatattagct taagggataa ataaatgaaa gtagcaagta gtcattatt240
tatgaagagt aataatt
                                         257

```

(2) INFORMATION ON SEQ ID NO. 134:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 204 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

```

gactggctca tggcctctgt aaatggctgc tggcgggact gtctgcctag cgggtgccct 60
tggaacctag cccttggtgg gttttgagga aatgattcct gaatgaggag tcgattgccg120
tgtgaagggc tgggtggcacg gcacccgcgt gagctacgcg tgccctcagt gcgcttctgg180
attgactggc catgggtgct caca                                     204

```

(2) INFORMATION ON SEQ ID NO. 135:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 245 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

```

ttgcaccatg gtaaactgtg ataatacagt atcatttttg agcagttttt taaatgtaaa 60
tctgtatctt actcagagtg tgtgtctgaa gttattaagg acatttccca acgttactgg120
cccatttccc tttgtaatca gaggaattct gtttcaagat tattgttggt tgtgatctgt180
ggctcttgat cagaatgaag ttaaattggc acaggaggat taagctatga ggttggcatt240
tttca                                     245

```

(2) INFORMATION ON SEQ ID NO. 136:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1637 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

```

ggggagggac gagtatggaa ccctgaaggt agcaagtcca ggcactggcc tgaccatccg 60
gctccctggg caccaagtcc caggcaggag cagctgtttt ccatcccttc ccagacaagc 120
tctattttta tcacaatgac ctttagagag gtctcccagg ccagctcaag gtgtcccact 180
atccctctg gaggaagag gcaggaaaat tctcccggg tccctgtcat gctactttct 240
ccatcccagt tcagactgtc caggacatct tatctgcagc cataagagaa ttataaggca 300
gtgatttccc ttaggccag gacttgggcc tccagctcat ctgttccttc tgggcccatt 360
catggcaggt tctgggctca aagctgaact ggggagagaa gagatacaga gctaccatgt 420
gactttacct gattgccctc agtttggggg tgcttattgg gaaagagaga gacaaagagt 480
tacttgttac gggaaatatg aaaagcatgg ccaggatgca tagaggagat tctagcaggg 540
gacaggattg gctcagatga cccctgaggg ctcttcaggt cttgaaatgc attccatgat 600
attaggaagt cgggggtggg tgggtggtgg gggctagttg gggttgaatt tagggggcca 660
tgagcttggg tacgtgagca ggggtgtaag ttagggctct cctgtatttc tgggtccctt 720
ggaaatgtcc ccttcttcag tgtcagacct cagtcccagt gtccatateg tgcccagaaa 780
agtagacatt atcctgcccc atcccttccc cagtgcactc tgacctagct agtgcctggg 840
gcccagtgac ctgggggagc ctgggtgcag gccctcactg gttccctaaa ccttgggtggc 900
tgtgattcac gtcccaggg gggactcagg gaggaatatg gctgagttct gtagtttcca 960
gagttggctg gtagagcctt cttagaggtc agaattattg cttcaggatc agctgggggt 1020
atggaattgg ctgaggatca aacgtatgta ggtgaaagga taccaggatg ttgctaaagg 1080
tgagggacag tttgggtttg ggacttacca ggggtgatgt agatctggaa cccccaagtg 1140
aggctggagg gagttaaggt cagtatggaa gatagggttg ggacagggtg ctttggaatg 1200
aaagagtgac cttagagggc tccttgggcc tcaggaatgc tcctgctgct gtgaagatga 1260
gaagggtgct ttactcagtt aatgatgagt gactatattt accaaagccc ctacctgctg 1320
ctgggtccct tgtagcacag gagactgggg ctaaggggccc ctcccaggga agggacacca 1380
tcaggcctct ggctgaggca gtagcataga ggatccattt ctacctgcat ttcccagagg 1440
actagcagga ggcagcctt agaaaccggc agttcccaag ccagcgctg gctgttctct 1500
cattgtcact gccctctccc caacctctcc tctaaccac tagagattgc ctgtgtcctg 1560
cctcttgctt cttgtagaat gcagctctgg ccctcaataa atgcttcctg cattcatctg 1620
caaaaaaaaa aatttttc

```

1637

(2) INFORMATION ON SEQ ID NO. 137:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 260 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

```

aaaagcatag ctcactctgt aataggctat ttccatgatt tcaagtgggt ttatgaagaa 60
acagaaagca gtgatgatgt tgaagtgtctg actctcaaga aattcaaagg agacctggcc120
tacagacgac aagagtatca ggtagaattc aacatatggt gcttgaagtg ggctcttggt180
ttatcagtta tggcatatgt aaataacagt gtaccaagtt agtgtggtgt ttatgaagat240
gagtttaatc ttttgtgatg
                                     260

```

(2) INFORMATION ON SEQ ID NO. 138:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 957 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

```

ggggaatttg tctttgaaa gcttgtgcaa cctctacaac tggcgataga agaatctagg 60
aaacttacc catgtgcagc tcttgccaga gttagtaga gcaaatgctg gcttactgta120
tgacttccag ctcatatg ttgaagatt tcaaggagt ggagaatctg aacctaattcc180
ttacttctat cagaatcttg gagaggcaga atatgtagta gcacttttta tgtacatgtg240
tttacttggt taccctgctg acaaaatcag tattctaaca acatataatg gccaaaagca300
tcttattcgc gacatcatca atagacgatg tggaaacaat ccattgattg gaagaccaaa360
caagggtgaca actgttgata gatttcaagg tcaacagaat gactatattc ttctttctct420
ggtacgaacc agggcagtgg gccatctgag ggatgtccgt cgcttggtag tggccatgtc480
tagagccaga ctgggacttt atatcttcgc cagagtatcc ctcttccaaa actgttttga540
actgactcca gctttcagtc agctcacagc tcgccccctt catttgcata taattccaac600
agaacctttc ccaactacta gaaagaatgg agagagacca tctcatgaag tacaataat660
aaaaaatatg cccagatgg caaactttgt atacaacatg tacatgcatt tgatacagac720
tacacatcat tatcatcaga ctttattaca actaccacct gctatggtag aagagggtga780
ggaagttcaa aatcaagaaa cagagttgga aacagaagaa gaggccatga ctgttcaagc840
tgacatcata ccagtcctaa cagacaccag ctgccgtcaa gaaactccag cctttgagcg900
tgagagccgc cccggtgggg aaggggcaat tgcgttgggg gggcttgggt gtttttt 957

```

(2) INFORMATION ON SEQ ID NO. 139:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 760 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

```

gtggaataca atagatatta atttgtggtt ggtttttctg cctgctttaa atgaaatgta 60
ttatgtttct ggggttcctt tttagctgta aaaatacttc gtcactaaag catgaaattt120
aatcagcagt tgttcttcaa gttcctgaaa gctataaaaag tttctcatga cttgagtgg180
tttttccctg cccaccagag gagaaagccc ttgtagaatt ctgcagtgtt acaagtgttc240
cctacaaaaa ctgaaacccat cagctcctct ttaacaagtt ggctttttta aagcacgtaa300
ttacaattta atggtattct gttaaagtgg gctctaggca taatttaaat tctttttaat360
gactatattt cttcaaaaact ttgaaagaaa aatgtgttct ttttgctgca tcctttgtaa420
gaagactgcc aacagaggaa aaaggacttt acaaattaag accatcttgg tttcatttcc480
acaaagatga gaacaaatca tgggtgttag aaaggatcct tagaagaaca caagaatttg540
aaagcccttg gtggttatca ctactatatt tcatatttcc acagaagtga cttagccaag600
ctctgcattt tgagcctgct gactttcatt taaaaggaat gaaaggctga aaatccaggc660
tgctgtgtct gtagataaag gtcaaacccat gtttgagttc ttcactgttg tgtccaccta720
aataaaactg agtaagtaat gaaaaaaaaa aaaaaaaaaa 760

```

(2) INFORMATION ON SEQ ID NO. 140:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 260 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

```

aggaaccctc cggcctagaa gtccagatgt cttgccaata tatctgtgct tcacaacttg 60
cctactctct ctgacccta acattttcac atacttttcc aattctgcct gtcataaatt120
tgctgcttcc ccctaagtag aatgttgatt cctgtcaaac acacagccta gccctgattc180
ctcctcttct ctcaagcagt gatattgtca acaatgataa acaactacta tgtactgagt240
gtttttttat gtgctgtca cactttatata acatgtatag 280

```

(2) INFORMATION ON SEQ ID NO. 142:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 461 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

```
gcggccgctc gaggaagca cccgccggtt ggccgaagtc cacgaagccg ccctctgcta 60
gggaaaacc ctggttctcc atgccacacc tctctccagg tgccctctgc ctcttcaccc120
cacaagaagc cttatcctac gtccttctct ccatctatcg gacccagtt tccatcacta180
tctccagaga ttagctatt atgcgcccgt ctacaggggg tgcccagca tgacggtgcc240
ttcgagtc aattactctt cgggtcccaa gggttggtt tcacgcgctc cattgccccg300
gcgtggcagg ccattccaag cccttcggg ctggaactgg tgcggagga gcctcgggtg360
tctcgtagc cctggtgttg gtgttgctc actcctctga gctcttctt ctgatcaagc420
cctgcttaaa gttaaataaa atagaatgaa tgataccccg g 461
```

(2) INFORMATION ON SEQ ID NO. 143:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 436 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

```

caaagatgtc atgtggccag aatcatcttt tagtctcacc actccacact gatggtcaca 60
tagaggtgtg agttgggaag ttgttaaata caagagggtt tgagcttctg gagaagagga120
aaatgtaaaa gtattttttc cttaaagaaa gataaaaagg taagcctaaa ccttggcggc180
caccgaagtc agctgttacg catgtgtagt taaatttcac tgtaaattatt tcataaggg240
tcttagaatg gagccagggt gacatcacag cccaactgt accaaaggaa ccatttcatt300
caaataagcc aacattttcca aagaaacacg aatgtctatg gcagagttaa cataaggtca360
gaaaatcctc tggaagaaat ttcggtatca atgtttataa tctctgcatt taggggttg420
ccagtttggg caaaaaa                                     436

```

(2) INFORMATION ON SEQ ID NO. 144:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 287 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

```

ctttaaagta gggctgtgga agggggatat agtagagggg gagagggctg ttttatacac 60
gtataaatgg tatacaccat ttatacacgg tggtcagaga agctctgatc aggtgacgta120
tgtacagaaa gtcactgtgg cctgagtaga gtcaaggaga aggagcagca agagttgagc180
ttagggaggt ggagaagggg tggaatagat caagcaagac cttggccctg gtagggatct240
gggatttaaa gtgagaggac aaccgttggg atgttgtgag cacagaa                                     287

```

(2) INFORMATION ON SEQ ID NO. 145:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 555 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

```

ggcgacgcct cggtactgac ctctgcagag cggggtggag cccattgacg tccagcgaac 60
gaggagcagc gatggacggt cgggtgcagc tgataaaggc cctcctggcc ttgccgatcc120
ggcctgcgac gcgtcgctgg aggaaccgca ttccctttcc cgagacgttt gacggcgata180
ccgaccgact cccggagttc atcgtgcaga cgggctccta catgttcgtg gacgagaaca240
cgttctccag cgacgccctg aaggtgacgt tcctcatcac ccgcctcaca gggcccgccc300
tgcagtgggt gatcccctac atcaagaagg agagccccct cctcaatgat taccggggct360
ttctggccga gatgaagcga gtctttggat gggaggagga cgaggacttc taggcgggga420
gaccctcggg cctgggggcg ggtgctctgg ggagggtccg ctgtgttact ggccgcccgc480
agggtcgcca ccggcgccct ccctccgcca gtccctcccc ctcgaaaccg ccgcgaagtc540
ccctgcggtg ctgtt                                     555

```

(2) INFORMATION ON SEQ ID NO. 146:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1790 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

```

agtgagaaaag cagggactct tcggcctagg cagccgggac ccagccagcc ctgcgcctcg 60
cgccgtcgcg catgcgtcct ggtcttttctc tagagttgta tatatagaac atcctggagt 120

ccaccatgaa cggacagttg gatctaagtg ggaagctaatt catcaaagct caacttgggg 180
aggatattcg gcgaattcct attcataatg aagatattac ttatgatgaa ttagtgctaa 240
tgatgcaacg agttttcaga ggaaaacttc tgagtaatga tgaagtaaca ataaagtata 300
aagatgaaga tggagatctt ataacaattt ttgatagttc tgacctttcc tttgcaattc 360
agtgacagtag gatactgaaa ctgacattat ttgttaatgg ccagccaaga ccccttgaat 420
caagtcaggt gaaatatctc cgtcgagaac tgatagaact tcgaaataaa gtgaatcgtt 480
tattggatag cttggaacca cctggagaac caggaccttc caccaatatt cctgaaaatg 540
atactgtgga tggtagggaa gaaaagtctg cttctgattc ttctggaaaa cagtctactc 600
aggttatggc agcaagtatg tctgcttttg atccttttaa aaaccaagat gaaatcaata 660
aaaatgttat gtcagcgttt ggcttaacag atgcctcagg ttccaggcca cccagtgtc 720
ctgcagaaga tcgttcagga acaccgcaga gcattgcttc ctctcctca gcagctcacc 780
caccaggcgt tcagccacag cagccaccat atacaggagc tcagactcaa gcaggtcaga 840
ttgaagggtca gatgtaccaa cagtaccagc aacaggccgg ctatggtgca cagcagccgc 900
aggtcccacc tcagcagcct caacagtatg gtattcagta ttcagcaagc tatagtcagc 960
agactggacc tcaacaacct cagcagttcc agggatatgg ccagcaacca acttcccagg 1020
caccagctcc tgctttttct ggtcagcctc aacaactgcc tgctcagccg ccacagcagt 1080
accaggcgag caattatcct gcacaaactt acactgcccc aacttctcag cctactaatt 1140
atactgtggc tcctgcctct caacctggaa tggctccaag ccaacctggg gcctatcaac 1200
caagaccagg ttttacttca cttcctggaa gtaccatgac cctcctcca agtgggccta 1260
atccttatgc gcgtaaccgt cctccctttg gtcagggcta taccacacct ggacctggtt 1320
atcgataagg aggtcctct acaccaatta atgtagctgc tagctattgg cctcccaaaa 1380
gactccagta ctattttaat ttgtattgaa gaagttcaga aatttaaaag cagagcattt 1440
tttatgatat cattgttggg gttaattgaa agtataattt gctggaacac aaagaccaa 1500
atgaaagttt tttcctccct gcttaaaaat gtagcagctt cttagttaact ttggaacact 1560
actcttacat gtataaagtg attgacttga ctttctagct tcccttgctc ggaggatatt 1620
aaaatgcttg ggtgaggtt agccatctta cttggctttt tactattaac atgatgtact 1680
aaagtagagc cctttgagaa tacaagatat tatgtataaa atgtaacact gatgataggt 1740
taataaagat gattgaatcc aaaaaaaaaa aaaaaaaaca aaaaaaaaca 1790

```

(2) INFORMATION ON SEQ ID NO. 147:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2357 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

```

ctcgagccga atcggctcga ggcagacct gcagcgggca aagagctccc gaggaagcac 60
agcttgggtc aggttcttgc ctttcttaat gtttagagaca gctaccggaa ggaggggaac 120
aaggagttct cttccgcagc ccctttcccc acgcccaccc ccagtctcca gggacccttg 180
cctgcctcct aggtctggaag ccatggtccc gaagtgtagg gcaaggggtgc ctcaggacct 240
tttgggtcttc agcctccctc agccccaggg atctgggtta ggtggccgct cctccctgct 300
cctcatggga agatgtctca gagccttcca tgacctcccc tccccagccc aatgccaaagt 360
ggacttggag ctgcacaaaag tcagcagggg ccactaaatc tccaagacct ggtgtgcgga 420
ggcaggagca tgtatgtctg caggtgtctg acacgcaagt gtgtgagtgt gagtgtgaga 480
gatggggcgg ggggtgtgtct gtaggtgtct ctgggcctgt gtgtgggtgg ggttatgtga 540
gggtatgaag agctgtcttc ccctgagagt ttctcagaa cccacagtga gaggggaggg 600
ctcctggggc agagaagttc cttaggtttt ctttggaaatg aaattcctcc ttcccccat 660
ctctgagtag aggaagccca ccaatctgcc ctttgcagtg tgcagggtgg aaggtaagag 720
gttgggtgtg agttggggct gccatagggg ctgcagcctg ctggggctaa gcggtggagg 780
aaggctctgt cactccaggc atatgtttcc ccatctctgt ctggggctac agaatagggt 840
ggcagaagtg tcacctgtg ggtgtctccc tcgggggctc ttccctaga cctccccctc 900
acttacataa agctcccttg aagcaagaaa gaggtccca gggctgcaaa actggaagca 960
cagcctcggg gatggggagg gaaagacggg gctatatcca gttcctgtct tctgtcatg1020
gggtggctgtg acaaccctgg cctcacttga ttcatctctg gttttcttgc caccctctgg1080
gagtcctcat cccattttca tcctgagccc aaccaggccc tgccattggc ctcttctccc1140
ttggcacact tgtaccaca ggtgaggggc aggacctgaa ggtattggcc gtttcaacaal200
tcagtcataa tgggtgtttt tgtcaactgc ttgttaattg atttggggat gtttggccc1260
aatgagaggt tgaggaaaag actgtgggtg gggaggccct gcctgaccca tcccttttcc1320
tttctggccc cagcctaggt ggaggcaagt ggaatatctt atattgggag atttgggggc1380
tcggggaggc agagaatctc ttgggagctt tgggtggcgc tgggtgcattc tgtttcctct1440
tgatctcaaa gcacaatgtg gatttgggga ccaaaggcca gggacacatc cccttagagg1500
acctgagttt gggagagtgg tgagtggagg ggaggagcag caagaagcag cctgttttca1560
ctcagcttaa ttctccttcc cagataaggc aagccagtca tggaatcttg ctgcaggccc1620
tccctctact ctctctgtcc taaaaatagg ggcgttttc ttacacaccc ccagagagag1680
gagggactgt cacactggtg ctgagtgacc ggggctgtgt gggcgtctgt tctttaccaal1740
aaccatccat ccctagaaga gcacagagcc ctgaggggct gggctgggct gggctgagcc1800
cctggtcttc tctacagttc acagaggtct ttcagctcat ttaatcccag gaaagaggca1860
tcaaagctag aatgtgaata taacttttgt ggaccaatac taagaataac aagaagccca1920
gtggtgagga aagtgcgttc tcccagcact gcctcctgtt ttctccctct catgtccctc1980
cagggaaaat gactttattg ctttaatttct gcctttcccc cctcacacat gcacttttgg2040
gccttttttt atagctggaa aaaacaaaat accaccctac aaacctgtat ttaaaaagaa2100
acagaaatga ccacgtgaaa tttgcctctg tccaaacatt tcatccgtgt gtatgtgtat2160
gtgtgtgagt gtgtgaagcc gccagttcat ctttttatat ggggttgttg tctcattttg2220
gtctgttttg gtccctccc tcgtgggctt gtgctcggca ccaaagagaa aaacgttttg2280
ggggcttgta atttatcttg aaaaatttaa ctttgagcga aaagggggag tgttttaccg2340
tgggggggta aaataaa
2357

```

(2) INFORMATION ON SEQ ID NO. 148:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 907 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

```

gttcattgtc tggcaccaag ctccttgggg tgaattttct tccaaaagag tccggggagt 60
ccaggtoctt cttcctgggt actcataacg cggccccatt tctcactccc attgggcgtc120
gggttttctag agaagccaat cagtgtcgcc gcagttccca gggttctaaag tcccacgcac180
cccgcgggac tcatattttt cccagacgcg gaggttgggg tcatggcgcc ccgaagcctc240
ctcctgctgc tctcaggggc cctggccctg accgatactt gggcgggtga gtgcgggggtc300
cagagagaaa cggcctctgt ggggaggagt gaggggcccg cccggtgggg gcgcaggact360
cagggagccg cgcccggagg agggctctggc ggggtctcagc ccctcctcgc ccccaggctc420
ccactccttg aggtatttca gcaccgctgt gtcgcggccc ggccgcgggg agccccgcta480
catcgccgtg gagtacgtag acgacacgca attcctgcgg ttcgacagcg acgccgcgat540
tccgaggatg gagccgcggg agccgtgggt ggagcaagag gggccgcagt attgggagt600
gaccacaggg tacgccaagg ccaacgcaca gactgaccga gtggccctga ggaacctgct660
ccgccgctac aaccagagcg aggctggtga gtgaacccgg ccggggggcg aggtcacag720
cacccccctat ccggcacggg accgcccggg tccttcagag ttccgggtgc gaaatgtacc780
ccgagggagg ggaggcggtg gattgctgga gtggatactg ggggggtttt acgcaggttc840
attttcagtt taggccaata tccccgcggg ttgggcgggg atgggggggg gttaggtggg900
cgggggtt

```

907

(2) INFORMATION ON SEQ ID NO. 149:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1987 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

```

aggagggcgtg gggggggggg cgggggagtc agggaagagc accatcgta agcagatgaa 60
gatcatccac gaggatggct actccgagga ggaatgccgg cagtaccggg cggttgtcta 120
cagcaacacc atccagtgcca tcattggccat tgtcaaagcc atgggcaacc tgcagatcga 180
ctttgccgac ccctccagag cggacgacgc caggcagcta tttgcaactgt cctgcaccgc 240
cgaggagcaa ggcgtgctcc ctgatgacct gtccggcgct atccggaggc tctgggctga 300
ccatggtgtg caggcctgct ttggccgctc aagggaatac cagctcaacg actcagctgc 360
ctactacctg aacgacctgg agcgtattgc acagagtgc tacatcccca cacagcaaga 420
tgtgctacgg acccgcgtaa agaccacggg gatcgtggag acacacttca ctttcaagga 480
cctacacttc aagatgtttg atgtgggtgg tcagcgggtc gagcggaaga agtggatcca 540
ctgctttgag ggcgtcacag ccatcatctt ctgctgagct tgagcgccca tgacttggtg 600
ctagctgagg acgaggagat gaaccgcatg catgagagca tgaagctatt cgatagcatc 660
tgcaacaaca agtggttcac agacacgtcc atcatcctct tcctcaacaa gaaggacctg 720
tttgaggaga agatcacaca cagtcccctg accatctgct tccctgagta cacagggggc 780

aacaatatg atgaggcagc cagctacatc cagagtaagt ttgaggacct gaataagcgc 840
aaagacacca aggagatcta cagcacttc acgtgcgcca ccgacaccaa gaacgtgcag 900
ttcgtgtttg acgccgtcac cgatgtcatc atcaagaaca acctgaagga ctgcggcctc 960
ttctgagggg cagcggggcc tggcgggatg ggccaccgcc gactttgtac cccccaacct 1020
ctgaggaaga tgggggcaag aagatcacgc tccccgcctg tcccccgcc gcttttctcc 1080
tctttcctct ctttgttctc agctccccct gtccccctcag ctccagacgt aggggagggg 1140
ttgccacagg cctccctggt tgaagcctgc ctttgtctga gatgctggtg atggccatgg 1200
taccoccttc tgggcatctg ttctggtttt taaccattgt cttgttctgt gatgagggga 1260
ggggggcaca tgetgagtct cccaaggctg cgtctggagg ggcccctgct tctccagcct 1320
ggacccccag ctttgcccaa caccagcccc tgccccagcc caagtccaaa tgtttacagg 1380
gagcctcctg cccagtcccc caaccccagc cgctcggagg ccccaaagga aaaagcacaal 1440
gaagcgtgag acgccaccat tcctggaaac cacagtccac ctgctcattc tcgtagcttt 1500
ttaaaaaaat gaaagtaaag gaaaaaaaaa aaactgcaaa tctagaaaac tttttagaga 1560
aaaactatth aaaactgtca gatcctgacc agcaagcgcc cccccagccc cccttccaag 1620
tgactccgtg ccttgagtggt gtctgcgtgt ttacaccctg ccctctgctg gccgcccccg 1680
tgcgagcggc acccctgccc tgccctccac agaattgggt tccaagggct gttccagaca 1740
actgccaacg tcaactgagg ccctgcccc gcgccctgg ccccaggctc tattaacctal 1800
aaatgtagct ccctagcgct aacctaggaa ccgcgcgtgc ctgctggggg gccacgcccc 1860
tcattgccct gtcccaggcc cggggccttc agcgttgaac acttccttgc tttttccaca 1920
tgttttatgg aattgttcac ctggtttgaa ataataaaat gtagaaagga aaaaaaaaaa 1980
aaaaaaa

```

1987

(2) INFORMATION ON SEQ ID NO. 151:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2906 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

gtccagaagc	aaaaattaag	ttccccaagt	tttccatgcc	caagatcggc	atcccaggtg	60
tgaaaatggg	gggtggggga	gccgaggtcc	atgccagct	accctctctt	gaaggagact	120
tgagaggacc	agatgttaag	ctcgaagggc	ccgatgtttc	tctaaagggg	ccaggagtag	180
acttgccctt	agtgaacctc	tctatgccaa	aagtctctgg	gcctgacctt	gatctgaact	240
tgaaaggacc	aagtttgaag	ggagacctgg	atgcatctgt	tcccagcatg	aaggtgcatg	300
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aagtgccagg	gatcgatgcc	acaacaaagc	ttaacgttgg	ggcaccagat	gtgacactga	420
ggggaccaag	cctgcaggga	gatctggctg	tctctgggtg	catcaaattg	cctaaagtat	480
ccgtaggagc	tcctgatcta	agcttggagg	catccgaagg	cagcattaaa	cttcccaaaa	540
tgaagctgcc	ccaatttggc	atctctactc	cggggtccga	cttgccacgtc	aatgccaaag	600
ggccacaggt	ttctggcgaa	ctgaaggggc	caggtgtgga	tgtgaacctg	aaagggcctc	660
ggatttcagc	accgaatgtg	gactttaact	tggaaaggacc	aaaagtgaag	gggagccctg	720
gggccactgg	tgagatcaaa	ggccccactg	tccgaggagg	tcttccaggc	attggtgttc	780
aaggccctaga	aggaaacctc	cagatgcctg	gaattaagtc	ctctggatgt	gatgtgaacc	840
tgccaggcgt	gaatgtgaaa	ctcccaactg	ggcagatttc	tgggcctgaa	atcaaagggtg	900
gtctgaaagg	ttcagaagta	ggtttccatg	gggctgctcc	tgatatcagt	gtgaaggggc	960
ctgcctttta	tatggcatct	cctgagtcag	attttggcat	caacttgaag	ggccccaaaa	1020
tcaaaggagg	tgccgatgtt	tcaggggggtg	tcagtgtccc	agacatcagc	cttgggtgaag	1080
ggcattttgag	tgtaaagggt	tccgggggtg	agtggaaagg	accccaagtc	tcctctgctc	1140
tcaacttgga	cacatctaag	tttgctgggg	gccttcattt	ctcaggacca	aaggtggaag	1200
gaggtgtgaa	aggaggtcag	attggactcc	aggctcctgg	gctgagtggt	tctgggcctc	1260
aaggtcactt	ggaaagtgga	tctggaaaag	taacattccc	taaaatgaag	atccccaaat	1320
ttacctttct	tgcccgtag	ctggttggca	gagaaatggg	ggtggatgtt	cacttcccta	1380
aagcagaggc	cagcatccaa	gctggtgctg	gagacggcga	gtgggaagag	tctgaagtca	1440
aactgaaaaa	gtccaagatc	aaaatgcccc	agtttaattt	ttccaaacct	aaagggaaag	1500
gtggtgtcac	tggtcaccca	gaagcatcaa	ttctgggtc	caaagggtgac	ctgaaaagtt	1560
caaaggccag	cctgggctct	ctggaaggag	aggcagaggc	cgaagcctct	tcaccgaaag	1620
gcaaattctc	cttattttaa	agtaagaagc	cacggcaccc	ctcaaattca	ttcagtgatg	1680
aaagagagtt	ctctggacct	tccaccccca	cggggacgct	ggagtttgaa	ggtggggaag	1740
tgtctctgga	aggtgggaaa	gttaaaggga	aacacgggaa	gctgaaattc	ggtacctttg	1800
gtggattggg	gtcaaagagc	aaaggtcatt	atgaggtgac	tgggagcgat	gatgagacag	1860
gcaagttaca	ggggagtggt	gtgtccctgg	cctctaagaa	gtcccgaact	tcctcctctt	1920
ctagcaatga	cagtgggaat	aaggttggca	tccagcttcc	cgaggtggag	ctgtcagttt	1980
ccacaaagaa	agagtagcag	gcctttgtag	aacaaaacat	cagccttggg	tggtgtgttc	2040
ctatataaac	tccaaaggga	aacacaccga	ctgcctcagc	aatcatgcaa	agaccttgcc	2100
tggcccgggt	gcaagcgctg	aaaaaccgac	cgcctgtagg	ctcctggaac	tatacagata	2160
ggtaaagagt	tccaagttcg	tccagcccat	gtgcaaagtc	aacagtattt	gccttaagat	2220
ttcatatata	tatatTTTTT	tgcattgact	gctgagagct	cctgtttact	aagcaagctt	2280
ttgtgtttat	tatctcattt	tttactgaac	attgttagtt	ttggggtaat	ggaaacccac	2340
tttttcattg	taatgacttt	gggggctttt	gttagtaagg	gtgggtgggg	tgatgggttg	2400
cagacggagg	tcaggtcttc	ctctttcctg	agactggatc	tgttcaaaca	gcaaacgccc	2460
acagatggcc	cagaggtggt	ggtagtccag	gtgtgtgggt	gttttttaggg	ttcttttagtg	2520
ttgtttcttt	cacccagggg	tggtggtccc	agccagtttg	gtgctgacgg	tgagaggaaa	2580
ttagaatctg	tttgcaaatt	gtccaaccca	ccccctcaac	atgaggggct	tccattttct	2640
gtgttttgta	agggaactgt	ttccttcatt	cgcctatggt	cctgatatta	gttctgattt	2700
cttttttaaca	aatgttatca	tgattaaaga	aatttccagc	actttaatgg	ccaatttaact	2760
gagaatgtaa	gaaaattgat	gctgtacaag	gcaaataaag	ctgtttatta	accttgaaaa	2820
aaaaaaaaaa	aagggaggga	ggggggggag	gggggagggg	gggggggggt	aggggggggg	2880
agggagggaa	agggggggcg	gggagg				2906

(2) INFORMATION ON SEQ ID NO. 153:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2367 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

```

gcctcccgcg cgcgcgcctct gtctccctct ctcacaaaac tgcccaggag tgagtagctg 60
ctttcgggtcc gccggacaca ccggacagat agacgtgcgg acggcccacc accccagccc 120
gccaaactagt cagcctgcgc ctggcgccct cctctccag gtccatccgc catgtggccc 180
ctgtggcgcc tcgtgtctct gctggccctg agccaggccc tgccctttga gcagagaggc 240
ttctgggact tcaccctgga cgatgggcca ttcagatga acgatgagga agcttcgggc 300
gctgacacct cgggcgtcct ggaccgggac tctgtcacac ccacctacag cgccatgtgt 360
cctttcgggt gccactgcca cctgcgggtg gttcagtgt cccacctggg tctgaagtct 420
gtgcccagaag agatctcccc tgacaccacg ctgtgtggac tgagaacaa cgacatctcc 480
gagctccgca aggatgactt caagggtctc cagcacctct acgccctcgt cctgggtgaac 540
aacaagatct ccaagatcca tgagaaggcc ttcagccac tgcggaagct gcagaagctc 600
tacatctcca agaaccacct ggtggagatc ccgcccacc taccagctc cctgggtggag 660
ctccgcatcc acgacaaccg catccgcaag gtgcccagg gagtggtcag tgggctccgg 720
aacatgaact gcacgcagat gggcggaac ccactggaga acagtggctt tgaacctgga 780
gccttcgatg gcctgaagct caactacctg cgcattctag aggccaaagt gactggcatc 840
cccaaagacc tccctgagac cctgaatgaa ctccacctag accacaacaa aatccaggcc 900
atcgaactgg aggacctgct tcgtaactcc aagctgtaca ggctgggcct agggcacaac 960
cagatcagga tgatcagaga cgggagctgc agcttccctg ccacctccg gtagctccac1020
ttggacaaca acaagttggc cagggtgccc tcagggtccc cagacctcaa gctcctccag1080
gtgggtctatc tgcaactcaa caacatcacc aaagtgggtg tcaacgactt tctgtccatg1140
ggcttcgggg tgaagcgggc ctactacaac ggcacagcc tcttcaacaa ccccggtgcc1200
tactgggagg tgcagccggc cactttccgc tgcgtcactg accgctggc catccagttt1260
ggcaactaca aaaagtagag gcagctgcag ccaccgagg gcctcagtgg ggggtctctg1320
ggaacacagc cagacatcct gatggggagg cagagccagg aagctaagcc agggcccagc1380
tgcgctccaa ccagccccc acctcgggtc cctgacccca gctcgatgcc ccacaccgc1440
ctctccctgg ctcccaaggg tgcaggtggg cgcaaggccc ggccccatc acatgttccc1500
ttggcctcag agctgcccct gctctcccac cacagccacc cagaggcacc ccataagct1560
ttttctctgt tcaactccaa acccaagtgt ccaaggctcc agtcctagga gaacagtcct1620
tgggtcagca gccaggaggc ggtccataag aatggggaca gtgggctctg ccagggtgc1680
cgcaactgtc cagacacaca tgttctgttc ctctcctca tgcatttcca gcctttcaac1740
cctccccgac tctgcggctc ccctcagccc ccttgcaagt tcatggcctg tccctccaag1800
accctgtct cactggccct tcgaccagtc ctccctctct ttctctctt ccccgctcct1860
cctctctctc tctgtgtgtg tgcgtgtgtg gtgtgtgtgt gtgtgtgtgt gtctgtgtgt1920
tcctcagacc tttctcgctt ctgagcttgg tggcctgttc cctccatctc tccgaacctg1980
gcttcgcctg tccctttcac tccacacct ctggccttct gccttgagct gggactgctt2040
tctgtctgtc cggcctgcac ccagcccctg ccacaaaaac cccagggaca gcggtctccc2100
cagcctgccc tgctcaggcc ttgcccccaa acctgtactg tcccggagga ggttgggagg2160
tgagggccca gcatcccgcg cagatgacac catcaaccgc cagagtccca gacaccggtt2220
ttcctagaag cccctcacc ccactggccc actggtggct aggtctcccc ttatccttct2280
ggtccagcgc aaggaggggc tgcttctgag gtcggtggct gtctttccat taaagaaaca2340
ccgtgcaacg tgaaaaaaaa aaaaaaa

```

2367

(2) INFORMATION ON SEQ ID NO. 154:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1314 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

```

cacacacctg cacatactca tgcattgcaca tgtacacacg cagtcacaca tgcactcacg 60
cagttgcaca cacacgcattg ctactcccca cactgtgtgc actcaggtgg ctgtgttgga 120
cagttggggc cagggtctcc ctgtgtctct gtggggcccg catctgtctt ccttctttct 180
ccccaggtac ttctactccc gaaggattga catcaccctg tcgtcagtca agtgcttcca 240
caagctggcc tctgcctatg gggccaggca gctgcagggc tactgcgcaa gcctctttgc 300
catcctcctc cccagggacc cctcgttcca gatgccctg gacctgtatg cctatgcagt 360
ggccacaggg gacgccctgc tggagaagct ctgcctacag ttcctggcct ggaacttcga 420
ggccttgacg caggccgagg cctggcccag tgtccccaca gacctgctcc aactgctgct 480
gccaggagc gacctggcgg tgcccagcga gctggcccta ctgaaggccg tggacacctg 540
gagctggggg gagcgtgcct cccatgagga ggtggagggc ttgggtggga agatccgctt 600
cccatgatg ctccctgagg agctctttga gctgcagttc aacctgtccc tgtactggag 660
ccacgaggcc ctgttccaga agaagactct gcaggccctg gaattccaca ctgtgccctt 720
ccagttgctg gcccgggtaca aaggcctgaa cctcaccgag gatacctaca agccccggat 780
ttacacctcg cccacctgga gtgcctttgt gacagacagt tcctggagtg cacggaagtc 840
acaactggtc tatcagttca gacggggggc tttgggtcaaa tattcttctg attacttcca 900
agccccctct gactacagat actaccctta ccagtccttc cagactccac aacaccccag 960
cttcctcttc caggacaaga ggggtgtcctg gtcctctggtc tacctcccca ccatccagag 1020
ctgctggaac tacggcttct cctgctcctc ggacgagctc cctgtcctgg gcctcacca 1080
gtctggcggc tcagatcgca ccattgccta cgaaaacaaa gccctgatgc tctgcgaagg 1140
gctcttcgtg gcagacgtca ccgatttcga gggctggaag gctgcgattc ccagtgcctt 1200
ggacaccaac agctcgaaag gaacctcctc cttccctgac cccggcagag cttttcaaac 1260
gggctttccg caacgggtca atccgcgcct ttctaacttg acaaacttct tcag 1314

```

(2) INFORMATION ON SEQ ID NO. 155:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 965 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

```

cctcccaaag gaactcccca atactagaac tcatcccaaa ccccttgac ttcaacaaat 60
taacgaaccc attccccaac ccacaatacc ccaccctcca acaacctaaa acaacgactt120
catgctcccg tgcccaaaac gcacagacct tcaacctgga cggctccctg atctatgaaa180
gactcccatc gtcttgacgt cggctcttcac cagcgtgcgg cagaaaaatcg agaaggagga240
tgacagtga ggcgaggaga gtgaggagga ggaagagggc gaggaggaag gctccgaatc300
cgaatctcgg tccgtcaaag tgaagatcaa gcttgccggc aaggagaagg cacaggaccg360
gctgaagggc ggccggcggc ggccgagccg agggctccga gccaaagccg tcgtgagtga420
cgatgacagt gaggaggaac aagaggagga ccgctcagga agtggcagcg aagaagactg480
agccccgaca ttccagtctc gaccccgagc ccctcgttcc agagctgaga tggcataggc540
cttagcagta acgggtagca gcagatgtag tttcagactt ggagtaaaac tgtataaaca600
aaagaatctt ccatatttat acagcagaga agctgttaga ctgtttgtga ctggccctgt660
cctggcatca gtagcatctg taacagcatt aactgtctta aagagagaga gagagaattc720
cgaattgggg aacacacgat acctgttttt cttttccgtt gctggcagta ctgttgccgc780
gcagtttgga gtcactgtag ttaagtgtgg atgcatgtgc gtcaccgtcc actcctccta840
ctgtatttta ttggacaggt cagactcgcc gggggcccgg cgagggtatg tcagtgtcac900
tggatgtcaa acagtaataa attaaaccaa caacaaaacg caaaaaaaaa aaaccaaggg960
cgaga                                             965

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(2) INFORMATION ON SEQ ID NO. 156:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3101 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

```

ctcgcgccgg acacagggag cagcgagcac gcgtttcccg caacccgata ccatcggaca 60
ggattttctcc gcctcagccc aacggggagg gctagttgca catagtgatt tagatgaaag 120
agctattgaa gctttaaaag aattcaatga agacggtgca ttggcagttc ttcaacagtt 180
taaagacagt gatctctctc atgttcagaa caaaagtgcc tttttatgtg gagtcatgaa 240
gacttacagg cagagagaaa aacaagggac caaagtagca gattctagta aaggaccaga 300
tgaggcaaaa attaaggcac tcttgaaaag aacaggctac acacttgatg tgaccactgg 360
acagaggaag tatggaggac cacctccaga ttccgtttat tcaggtcagc agccttctgt 420
tggcactgag atattttgtgg gaaagatccc aagagatcta tttgaggatg aacttggtcc 480
attatttgag aaagctggac ctatatggga tcttcgtcta atgatggatc cactcactgg 540
tctcaataga ggttatgcgt ttgtcacttt ttgtacaaaa gaagcagctc aggaggctgt 600
taaactgtat aataatcatg aaattcgttc tggaaaacat attggtgtct gcatctcagt 660
tgccaacaat aggctttttg tgggctctat tcctaagagt aaaaccaagg aacagattct 720

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tgaagaat	agcaaagtaa	cagaggggtct	tacagacgctc	attttataacc	accaaccgga	780
tgacaagaaa	aaaaacagag	gcttttgc	tcttgaatat	gaagatcaca	aaacagctgc	840
ccaggtaaaa	gtgctgtttg	tacgcaacct	tgccaatact	gtaacagaag	agattttaga	900
aaaggcattt	agtcagtttg	ggaaactgga	acgagtgaag	aagttaaaag	attatgcgtt	960
cattcatttt	gatgagcgag	atgggtgctgt	caaggctatg	gaagaaatga	atggcaaaga	1020
cttgaggagg	gaaaatattg	aaattgtttt	tgccaagcca	ccagatcaga	aaaggaaaga	1080
aagaaaagct	cagaggcaag	cagcaaaaaa	tcaaagtgtat	gacgattact	actattatgg	1140
tccacctcat	atgccccctc	caacaagagg	tcgagggcgt	ggaggtagag	gtgggttatg	1200
atatcctcca	gattattatg	gatatgaaga	ttattatgat	tattatggtt	atgattacca	1260
taactatcgt	ggtggatatg	aagatccata	ctatgggttat	gaagattttc	aagttggagc	1320
tagaggaagg	ggtggtagag	gagcaagggg	tgctgctcca	tccagaggtc	gtggggctgc	1380
tcttccccgc	ggtagagccg	gttattcaca	gagaggaggt	cctggatcag	caagaggcgt	1440
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tgcagtgagg	taatggtaag	gaaatcaagc	aaccttaaat	atgtcggctg	tataggagca	1620
tattctattg	cagaagacct	tcctatgaag	atcatggaat	caaatacggg	acattgaact	1680
aatacttgga	ctttgatatg	aatttcttta	acaattttct	ctgcagtgca	agttattaaa	1740
ctaaagctac	tctattttca	aaatgtgttc	caacagaaat	ccttcataac	tcctagcatg	1800
gtatcttaat	aaagaataaaa	gttcttttaa	aaatctgctc	taagtagatt	ttcccccttt	1860
tttaaattaa	ggatcccaac	agtgggtattt	tgaaatattc	tcttgaat	gtgcatttaa	1920
attttattgc	agtggtatag	atgaatgcc	ctgatgggtat	ccttaaattt	tatttctgct	1980
caccaagggt	aatcatgatt	gtctatatct	tttttatagt	gatcactttt	gaattgtggt	2040
cagatatgca	gtttcagggtg	taatcatcag	agctgggttag	tcaggcattc	cagatagtgg	2100
ttcttttcag	aaccttttta	aaagggttgg	ttactacct	cagtagcaga	ggattgaact	2160
ataccctgtc	tgtactgtac	atagaaaatc	tttgtagata	aaagcaaggc	ttgttaaata	2220
tgatatgagg	gtaagatttt	aatataccaa	atgtaacatt	ccttagttgcc	tttagtttca	2280
gaggcttgta	agacttcctc	atgaccatca	taacaggcct	tgcttttgc	gtattttgtg	2340
gctgaaaaag	cagccttgct	tcttcagata	ttgtagttat	ttggatgtat	aatagtttag	2400
caagatgtta	cttttgtaag	acatcagatg	ttcaaaaaag	tgcatccgaa	cctgtactaa	2460
atactgcagt	gtccctttat	aaaaagtcag	actaaaaactg	acaattgtac	agcgaagcct	2520
gacatttgga	tattttgaag	ttttttcata	aatcatagaa	attagtatat	ggctgtagtt	2580
tagcttttta	ggtaaaagggt	atgtttcatt	agtgcatttc	ttcctgctga	tcactgtaaa	2640
catgtgaatc	agctttccat	ttcttatgca	ggcatgata	acttgtagag	tagagtacaa	2700
tcatttgtgc	tatgttttta	attttctaaa	gcaccttgat	gacagtgagt	gtccagtggg	2760
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ccttccccaa	agggatactg	cagttatctc	acatacccaa	taggcaccac	gatgaagatc	2940
agagcttata	cttaattaag	gttttataca	caccagttcc	ccagtaaattg	caaatttaac	3000
aagaaaatca	gacatgtcat	atgttcaaaa	tgctcatggc	aaacaatcat	tttgcattcc	3060
tgcaaataaa	attgttttat	actgtaaaac	aaaaaaaaaa	a		3101

(2) INFORMATION ON SEQ ID NO. 157:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 983 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

```

ggggcgggag cggcgggtcca gactggggag ggacgcgcac cggccaggag gcttcaagag 60
gagggcacta gggccctgcg agcggcgtct taaccggcgg cgctaggact ccgcgggaaa120
cggcgggggc ggacgggcgg caccaggacc caggggaacc gcgacgggcg ggcggcgagc180
aggcccggga gccgggaggt gcgggcggcg gcgctggacc cgacgcggcg agagaggccc240
cgagatgccg agcaagaaga agaagtacaa cgcgcgggttc ccgccggcgc ggatcaagaa300
gatcatgcag acggacgaag agattgggaa ggtggcggcg gcggtgcctg tcatcatctc360
ccgggcgctc gagctcttcc tagagtcgct gttgaagaag gcctgccagg tgacccagtc420
gcggaacgga aagaccatga ccacatccca cctgaagcag tgcatcgagc tggagcagca480
gtttgacttc ttgaaggacc tggtggcatc tgttcccgac atgcaggggg acggggaaga540
caaccacatg gatggggaca agggcgcccg cagggccgga agccaggcag cggcggcccg600
aagaacggtg ggatgggaac gaaaagcaag gacaagaagc tgtccgggac agactcggag660
caggaggatg aatctgagga cacagatact gatggggaag aggagacatc acaaccccca720
ccccaggcca gccacccctc tgcccacttt cagagccccc cgacaccctt cctgcccttc780
gcctctactc tgcccttgcc ccagcgcgcc ccgggcccct cagcacctga tgaagaggac840
gaagaagatt acgactccta gcgccttctg cccccagac catagcccct tttagttggt900
tttagttgct ctggggggag gagagaaggt agagctgttc ttaaatttat taacaaaaaa960
aataaaaggg aaaaaaaaaa aaa                                     983

```

(2) INFORMATION ON SEQ ID NO. 158:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 293 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

```
FIDSYRCFQP KQEGAFTCWS AVTGARHLNY GSRLDYTLGD RTLVIDTFQA SFLLPEVMGS 60
DHCPVGAVLS VSSVPAKQCP PLCTRFLPEF AGTQKILRF LVPLEQSPVL EQSTLQHNNQ120
TRVQTCQNK A QVRSTRPQPS QVGSSRGQKN LKSYFQPSPS CPQASPDIEL PSLPLMSALM180
TPKTPEEKAV AKVVKGQAKT SEAKDEKELR TSFWKSVLAG PLRTPLCGGH REPCVMRTVK240
KPGPNLGRRF YMCARPRGPP TDPSSRCNSS SGAGPAEPME AWGHLAWSPL HMI 293
```

(2) INFORMATION ON SEQ ID NO. 159:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 131 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

```
ETLREKQEEA QGRGAGLRSC AGVTMPDVPR PPLVQLGLLQ RKNCTGRRGQ WEDPGAWHTC 60
RSGGPSWVLA SSQYASHMAP CGPHRGVCAR APPAQTSRMR SVTPSHLWLL KSWPAPSPLW120
PLPSLLESSG S 131
```

(2) INFORMATION ON SEQ ID NO. 160:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 94 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

KRRPKLGPGF FTVRITHGSL WPPQRGVRKG PASTDFQNEV RNSFSSLASE VLACPFTTLA60
TAFSSGVFGV MRALISGRLG SSMSGEAWGQ LGEG 94

(2) INFORMATION ON SEQ ID NO. 161:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 136 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

LHQLAAQRLY LRPVRVGAWA LSLPGERRAE ISNQWSALVT WIPEGREGST VSSAADCCSK 60
NVFSTSFESP SHGNPSTPTR DPTPAVSRI STCTSRDPND SCTNEHYGSC SNCLSTHCYV120
GWKAFGRKKG SSRLKG 136

(2) INFORMATION ON SEQ ID NO. 162:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 281 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

PGSQKVAKAV PFPQRRTAAV RMSFPPHLNR PPMGIPALPP GIPPPQFPFGF PPPVPPGTPM 60
IPVPMSIMAP APTVLVPTVS MVGKHLGARK DHPGLKAKEN DENCGPPTTV FVGNISEKAS120
DMLIRQLLAK CGLVLSWKRV QGASGKLQAF GFCEYKEPES TLRALRLLHD LQIGEKLLV180
KVDAKTKAQL DEWKAKKKAS NGNARPETVT NDDEEALDEE TKRRDQMIKG AIEVLIREYS240
SELNAPSQES DSHPQEEEEG KEGGHFPQIS SGPTDPLSTH H 281

(2) INFORMATION ON SEQ ID NO. 163:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 103 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

CSLVQESLGS LEVQVEEILE TAGVGSVLGV LGFPWEGDSN EVEKTFLLQQ SAAETVLPS 60
 RPSGIQV TSA LHWFEISARR SPGRLSAQAP TRTGRKYSRC AAS 103

(2) INFORMATION ON SEQ ID NO. 164:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 127 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

NISLLDHPGL QSCLYFLFWI LFTNRERYIS AWKWPDVWKL DIWHFGLHSH GYYSHNKDGS 60
 GNSFLDLDP SRYLGIYYIL FCIFVLWRD SLAIFGLPEY VFCVYSAPVK WFCLVCHNPH120
 GCYMSIS 127

(2) INFORMATION ON SEQ ID NO. 165:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 382 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

```
HEVLCCRMALP LQKAKVIRLI KISPEKPITL AVGDGANDVS MIQEAHVGIG IMGKEGRQAA 60
RNSDYAIARF KFLSKLLFVH GHFYIIRIAT LVQYFFYKNV CFITPQFLYQ FYCLFSQQTL120
YDSVYLTLYN ICFTSLPILI YSLLEQHVDP HVLQNKPTLY RDISKNRLLS IKTFLYWTIL180
GFSHAFFFFF GSYLLIGKDT SLLGNGQMFG NWTFGTLVFT VMVITVTIKM ALETHFWTWI240
NHLVTWGSII FFFVFSLFYG GILWPFLGSQ NMYFVFIQLL SSGSAWFALL LMVVTCLFLD300
IIKKVFDRHL HPTSTKAQM YSNTVALSDE FIALQPLSRA RNQLSKLSLL KMQVSSAWT360
PCAVSRKEKQ RVHLLLECWN EL
```

382

(2) INFORMATION ON SEQ ID NO. 166:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 85 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

```
QELNKHKIHI LGAQKWPENP SIKQGKYKIK YNRSPGNEMV DPSPKMSFQS HLYCDCNNHD60
CEDQSAKCPV SKHLAISKQR CIPFY
```

85

(2) INFORMATION ON SEQ ID NO. 167:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 496 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

RLEKGPLPFQ MPMRLPETQ VLPGEIDETP LSKPGHDLAS MEDKTEKWSS QPEGPLKLKA 60
 SSTDMPSQIS VVNVDQLWED SVLTVKFPEL MVPRFSFPAP SSDDVFIPT VREVQCPEAN120
 IDTALCKESP GLWGASILKA GAGVPGEQPV DLNLPLEAPP ISKVRVHIQG AQVESQEVTI180
 HSIVTPEFVD LSVPTFTSTQ IVRESEIPTS EIQTPSYGFS LLKVKIPEPH TQARVYTTMT240
 QHSRTQEGTE EAPIQATPGV DSISGDLQPD TGEFFEMISS SVNVLGQQT LTFEVPSGHL300
 ADSCSDEEPA EILEFPDDDS QEATTPLADE GRAPKDKPES KKSGLLWFWL PNIGFSSSV360
 ETGVDSKNDV QRSAPIQTQP EARPEALPK KQEKAGWFRF PKLGFSSSPT KKSSTEDGA420
 ELEEQLQEE TITFFDARES FSPEEKEEGE LIGPVGTGLD SRVMVTSAA TELILPEQDR480
 KADDESKGSG LGPNEG 496

(2) INFORMATION ON SEQ ID NO. 168:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 125 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

SLPASMYWDS KHSHLKFLLA TSLQTAVQMR SQQKFLSFPL MIAKRQPHHW QMKAGLQKTN 60
 QKVKNLVC SGFGQTLGFPL LLMRQVLIPK MTSRDLLEPK HSLRHDQRQN CLKNRRRQAG120
 SDFPN 125

(2) INFORMATION ON SEQ ID NO. 169:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 130 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

MGADLWTSFL ESTPVSTEE ENPMFGSQNQ SRPDFLLSGL SFGALPSSAS GVVASWLSSG 60
 GNSRISAGSS SEQLSASWWP EGTSNVSVCC PSTLTLEEEI SNGSPVSGWR SPEMESTPGV120
 ACMGASSVPS 130

(2) INFORMATION ON SEQ ID NO. 170:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 123 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

VVYRGVKCFI DKKKKTALEP TYSSSSSSSS SSSSSSSSSS SSSSSSSSSS SSFFFLLFSA 60
 LTTPFFAASG FPLARYAAIS FSYFSFSTSQ SFHKAACHLQ QCYSTSLPVS SQHHQWTGQD120
 VLL 123

(2) INFORMATION ON SEQ ID NO. 171:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 157 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

KKLYLLRSIQ NVNKTAAIFF LQLQSGIOLT EQQLSSYKLH QRQLKMKKIK PKKKTKRKKK 60
 KKOKTKLPSP YITNLCCAPT RTCFKFPCQF TTPILYQARL VAIENTTRTG LSKDTFGSVL120
 TIQKKTLYSL KTNLTQPYIS IFFFKRSELC TGGLNAL 157

(2) INFORMATION ON SEQ ID NO. 172:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 152 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

```

LNMGKGDPKK PRGKMSSYAF FVQTCREEHK KKHPDASVNF SEFSKKCSER WKTMSAKEKG 60
KFEDMAKADK ARYEREMKTY IPPKGETKKK FKDPNAPKRP PSAFFLFCSE YRPKIKGEHP120
GLSIGDVAKK LGEMWNNTAA DDKQPYEKKA AK                                     152

```

(2) INFORMATION ON SEQ ID NO. 173:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 281 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

```

SGSAGPGPRG PRATESGKRM DCPALPPGWK KEEVIRKSGL SAGKSDVYYF SPSGKKFRSK 60
POLARYLGNT VDLSSFDERT GKMMPSKLQK NKQRLRNDPL NQNKGKPDNL TTLPIRQTAS120
IFKQPVTKVT NHPSNVKSD PQRMNEQPRQ LFEWKRLQGL SASDVTEQII KTMELPKGLQ180
GVGPGSNDST LLSAVASALH TSSAPITGQV SAAVEKNPAV WLNTSQPLCK AFIVTDEDIR240
KQEERVQQVR KKLEEALMAD ILSRAADTEE MDIEMDSGDE A                               281

```

(2) INFORMATION ON SEQ ID NO. 174:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 102 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

IIDIIYIKNTS KKALVSAIKK LYVLGYIFFL TGKSQWKHFC SISRNFLLGK VGRKLPDHIL 60
RLHLHCPFY PSLLYQQLAT RCLPSVLLPI SCVLAVLALP VS 102

(2) INFORMATION ON SEQ ID NO. 175:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 147 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

IYTSKIHLKR HWLVLLKSSM CSGTFFFLQA KASGNIFVQF LGIFSWGKSV ESYLIIFLGF 60

ISTVHFNIHL FCISSSRQDV CHQCFQFLA YLLYSLEFLFP DVFICDNKSF AEGLRCVKPN120
SRVLFHSSGD LPCDWRRACV QSTGNSR 147

(2) INFORMATION ON SEQ ID NO. 176:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 85 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

ECPLGARGPW EPRHFFFLGR GARSRHPCTH GRLAPPQSPP HSQQPFHSHC PSRSPQPSLR60
PHPHPLRAQG CNPSLSTTHR WYSWG 85

(2) INFORMATION ON SEQ ID NO. 177:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 128 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

NALWGPGAPG SPATLSHLAG VPAAATPARM AGWHPPRALP TASSLSTVTA LPAVPSLPYG 60
LTRTPSEPR ATPHYPPRTD GTAGAEQPHV EPERVPGARG QDAGGRMTAC PCLTSWGTTL120
DRGIGQDP 128

(2) INFORMATION ON SEQ ID NO. 178:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 106 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

MPFEGGQGPLG APPPFPTWPG CPQPPPLHAW QAGTPPEPSP QPAAFPQSLP FPQSPAFPTA 60
SPAPPQSPGL QPLIIHHAQM VQLGLNNHMMW NQRGSQAPED KTQEAE 106

(2) INFORMATION ON SEQ ID NO. 179:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 77 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

GNPELPWRKF QCQHSCSLWP SPTLWPEIPQ SNLEPKRTQR TLDPNCPRPS PEVGVTNSSG60
 LRHMKKLYIN PRQATNP 77

(2) INFORMATION ON SEQ ID NO. 180:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 64 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

PPTHTRQVGE EIQSCHGENS SVSILAPCGP LLHSGQRYHS QTWSQKGHKG LSTQTAPDPL60
 QRLG 64

(2) INFORMATION ON SEQ ID NO. 181:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 206 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

```
RLSCAGTLSG SGEHPSRRLT QGRWVRKSRV AMEKIPVSAF LLLVALSYTL ARDTTVKPGA 60
KKDTKDSRPK LPQTLSRGWG DQLIWTQTYE EALYKSKTSN KPLMIIHHL D ECPHSQALKK120
VFAENKEIQK LAEQFVLLNL VYETTDKHL S PDGQYVPRIM FVDPSLTVRA DITGRYSNRL180
YAYEPADTAL LLDNMKKALK LLKTEL                                     206
```

(2) INFORMATION ON SEQ ID NO. 182:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 206 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

```
RVFQEELVR RQRNGASGPR PGLRRLRGGR RAVRRKERLL HRQLPAVHKR GARVKLSSPE 60
RDVERDVFLY RAYLAQRKFG VVLDEIKPSS APELQAVRMF ADYLAHESRR DSIVAELDRE120
MSRSVDVTNT TFLMAASIY LHDQNPDAAL RALHQGDSLE CTAMTVQILL KLDRLDLARK180
ELKRMQDLDE DATLTQLKVL VSLQRV                                     206
```

(2) INFORMATION ON SEQ ID NO. 183:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 111 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

LPRPRESEGO HRGRAGPRDE QERGRDQHHL PAHGRHLHLS RPEPGCRPAC AAPGGQPGVH 60
 SHDSADPAEA GPPGPRPEGA EENAGPGRGC HPHPAQGLGK LATGVKAQGS F 111

(2) INFORMATION ON SEQ ID NO. 184:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 165 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

GTILPIPEIR RILELLHPLQ AYQDLELGEG GILVQVLHSL QLLPGEVQAV QLQDDLHCHG 60
 CALQAVPLVQ RTQGGIRVLV VEIDGGGHEQ EGGVGHVHAP AHLVQLGHD AVPPTLVGEV120
 VSKHAHGLEL RGRGGDLIQ DHTELPLRQV RSIQEDVPLH VSLWA 165

(2) INFORMATION ON SEQ ID NO. 185:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 75 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

LLSMRMILKP QSFMILMLR SSNRVTWKLL LIGLDYIRYQ MENQKTSLLL MENSCTRLLL60
 LKLLNPLINV GKHC L 75

(2) INFORMATION ON SEQ ID NO. 186:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 340 amino acids
- (B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

```
RTVIDAMSAL LRLLRGTGAPA AACLRLGTSA GTGSRRAMAL YHTEERGQPC SQNYRLFFKN 60
VTGHYISPFH DIPLKVNSKE ENGIPMKAR NDEYENLFNM IVEIPRWTNA KMEIATKEPM120
NPIKQYVKDG KLRYVANIFP YKGYIWNYG LTQTWEDPHE KDKSTNCFGD NDPIDVCEIG180
SKILSCGEVI HVKILGILAL IDEGETDWKL IAINANDPEA SKFHDIDDDVK KFKPGYLEAT240
LNWFRLYKVP DGKPENQFAF NGEFKNKFAF LEVIKSTHQC WKALLMKKCN GGAINCTNVQ300
ISDSPFRCTQ EEARSLVESV SSSPNKESNE EEQVWHFLGK 340
```

(2) INFORMATION ON SEQ ID NO. 187:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 131 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

```
LSILYILFNG IHWLLGGNLH FSICPPRYFY NHIKQILIFI ISCFLHRNAI FLFRVHLQRN 60
IMKGGNVVTS YILKEEAVIL RAGLAALLSV VQGHSTARPG PCTGPPQPQAR SGWGTRAQQP120
QQRAGHVNDG P 131
```

(2) INFORMATION ON SEQ ID NO. 188:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 436 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

```
GRGMGRVQLF EISLSHGRVV YSPGEPLAGT VRVRLGAPLP FRAIRVTCIG SCGVS NKAND 60
TAWVVEEGYF NSSLSLADKG SLPAGEHSFP FQFLLPATAP TSFEGPFGKI VHQVRAAIHT120
PRFSKDHKCS LVFYILSPLN LNSIPDIEQP NVASATKKFS YKLVKTGSVV LTASTDLRGY180
VVGQALQLHA DVENQSGKDT SPVVASLLQK VSYKAKRWHI DVRTIAEVEG AGVKAWRRAQ240
WHEQILVPAL PQSALPGCSL IHIDYYLQVS LKAPEATVTL PVFIGNIAVN HAPVSPRPGL300
GLPPGAPPLV VPSAPPQEEA EAEAAAGGPH FLDPVFLSTK SHSQRQPLLA TLSSVPGAPE360
PCPDGSPAS HPLHPPLCIS TGATVPYFAE GSGGPVPTTS TLILPPEYSS WGYPYEAPPS420
YEQSCGGVEP SLTPES 436
```

(2) INFORMATION ON SEQ ID NO. 189:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 127 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

```
SVLETGVVSP GPSSLPPPPQ PQGEEGGCRG AGRGWAGPEW ARLGQERRHE ALGAPVPGQR 60
PGLPGEGETG SALRGQAGFH AAAALLIRRW GLIGVAPRTV LWRKNQGAGS GHWPPGALCK120
VGDSGTC 127
```

(2) INFORMATION ON SEQ ID NO. 190:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 213 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

```
LVLNVGMQLQ CLPHHIAAEI SAGCEDHAAR LHQLVGELLG GRGHVGLLNW WDAVQVQGAQ 60
DIEHEAALVI LGKPWRVDGG PHLVHDLPER TLKGRGCSGR KQELEGEAVL SSGQAPLVCQ120
RQGTVEVTLL HYPRCVISLV GDPAGTYAGH PDGSRQRCP QAHAGGPSQR LPGAVDDAAV180
AQADLEELHS PHAAASPASR AATPPPAARE SRL 213
```

(2) INFORMATION ON SEQ ID NO. 191:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 635 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

```
GGVSPWRACV QQRMEESEPE RKRARTDEVP AGGSRSEAED EDDDYVPYV PLRQRRQLLL 60
QKLLQRRRKQ AEEEEQDSG SEPRGDEDDI FLGPQSNVSL LDQHQLKEK AEARKESAKE120
KQLKEEEKIL ESVAEGRALM SVKEMAKGIT YDDPIKTSWT PPRYVLSMSE ERHERVRKKY180
HILVEGDGIP PPIKSFKEMK FPAAILRGLK KKGIIHPTPI QIQGIPTILS GRDMIGIAFT240
GSGKTLVFTL PVIMFCLEQE KRLPFSKREG PYGLIICPSR ELARQTHGIL EYYCRLQLQED300
SSPLLRCALC IGGMSVKEQM ETIRHGVMHM VATPGRLMDL LQKKMVSLDI CRYLALDEAD360
RMIDMGFEGD IRTIFSIFKG QRQTLLFSAT MPKKIQNFAK SALVKPVTIN VGRAGAASLD420
VIOEVEYVKE EAKMVYLLEC LQKTPPPVLI FAEKKADVDA IHEYLLKGV EAVAIHGGKD480
QEERTKAIEA FREGKKDVLV ATDVASKGLD FPAIQHVINY DMPEEIEYV HRIGRTGRSG540
NTGIATTFIN KACDESVLMD LKALLLEAKQ KVPPVLQVLH CGDESMLDIG GERGCAFCGG600
LGHRITDCPK LEAMQTKQVS NIGRKDYLAH SSMDF 635
```

(2) INFORMATION ON SEQ ID NO. 192:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

```
KPSRRCRPCC RCCIAGMSPC WTLEESAAMP SAGAWVIGSL TAPNSRLCRP SRSATSVART 60
TWPTAPWTSE PTVFPSLQEA SVPKTATSLH IQPPGQNOH FSSAGLEWAR LVLAACSLCS120
SELLFLFPFT PAAIKAQTSS PKKKKKK                                     147
```

(2) INFORMATION ON SEQ ID NO. 193:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 150 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

```
DILLALPECL DGLSPFLLVF APMDGYGLNP LEQQVLVDGV HVCLLLCKDE YRRGCLLQAL 60
EQVHHLGLLL HIFYLLDDIQ AGSPSAPHID GHRLYKGTLS KVLNLLRHGG TEEQGLSLAL120
EVGEDGTDVT LEAHVDHAVS LVQGQVATDV                                     150
```

(2) INFORMATION ON SEQ ID NO. 194:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 310 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

```
EAPAAARTQS PAAAAQRGDN VYVVTEVLQT QKEVEVTRTH KREGSGRFSL PGATCLOGEG 60
QGHL SQKKT V TIPSGSTLAF RVAQLVIDSD LDVLLFPDKK QRTFQPPATG HKRSTSEGAW120
PQLPSGLSMM RCLHNFLTDG VPAEGAFTED FQGLRAEVET ISKELELLDR ELCQLLEGL180
EGVLRDQLAL RALEEALQGG QSLGPVEPLD GPAGAVLECL VLSSGMLVPE LAIPVVYLLG240
ALTMLSETQH KLLAEALSEQ TLLGPLELVG SLLEQSAPWQ ERRPCPCPPG SWGTAGAKEH300
RPGSCWTSVA                                     310
```

(2) INFORMATION ON SEQ ID NO. 195:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 244 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

```
TTGIASSGTS IPEDNTRHSR TAPAGPSRGS TGPRLWPCSS ASSKARRASW SRSTPSRPSS 60
SSWHSSLSKS SSSLEMVSTS ARRPWKSSVN APSAGTPSVR KLWRHLIMER PEGSCGQAPS120
LVERLWPVAG GWKVLCLFSG KRRTSKSESI TSWATRNARV LPEGMVTVFF WLRWPWPSPC180
KHVAPGRENR PEPSRLWVRV TSTSFVCVST SVTTYTLSPR CAAAAGLCVL AAAGASHGAE240
SARC                                             244
```

(2) INFORMATION ON SEQ ID NO. 196:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 229 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

```
TGHMATGLLA FLGLAAGGQT LCPAGELPGH ARAQASGAPG SVLIAVPGRR RVHTCGPGPA 60
APSTRGECPP PALGHTRPAR PRPVLLRPSC SPGARGAGTW SALLPRGTLL QEAAHQLERP120
QQGLRLQRLR QQLVLRFTQH GQCPQQVDNR DSEFRHQHSG GQHQAQDST CWTVQGLHRP180
KALALLQRLR QGSQGLVPQ HPLQALQQQL AQLSVQKLQF LGDGLHLCF 229
```

(2) INFORMATION ON SEQ ID NO. 197:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 95 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

```
TEILPVEFVRL AGVPICSTGN ASAMLQPQKP GLSLQQQAEP CLWSGAVHSS VCLVLGLELD60
RGGVSSPSLN SEQTLCLAPV CPGNSPGPHW EPLVF 95
```

(2) INFORMATION ON SEQ ID NO. 198:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 101 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

```
AVPRGSLRED GKVRCMSNLL MAGSPLCPLS LALVIAELCA QCCGLAVARL FLWGARAGCG 60
NQSSQTDVSQ AEDSFLAEVS PHLQVSGWGG ARRGRHTPCL T 101
```

(2) INFORMATION ON SEQ ID NO. 199:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 155 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

```
VRHTSHLAVL TQGAPGHCSC AAWALLLRTP RAPNEGLGNC LGTLGPGTGS VLNSGKVKRP 60
HLYPAQAQEQ GRQSCGQHPT TDTVLPAAGV RGLVSEAAW HWHCLCYRWG LLRVSQIQGE120
FQFTQPKGPV CRAALTRAQQ HSTELGKGRG ERVKD 155
```

(2) INFORMATION ON SEQ ID NO. 200:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 138 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

```
RMKCSQPPRC HFQSDFOKCA PCPRAQTHWL EPPGRVQTIS SMRNAQKGFA DSIRLWRLPA 60
SGVGWVVSPP IQTQEVAPEG MYLVGSSSGT LGGCRALTQV FLSLSSLGCV CACACACLCF120
SLWAHQDAPR RACARVPT 138
```

(2) INFORMATION ON SEQ ID NO. 201:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 132 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

VHGREARLGT LAGTAALKPA LLSGYQTFKG QDVLRRVPVA ARRPAGACPR VTAWRCWGSG 60
HLPCLCQEG EAFEEASVLA ARSLSQLPG SCTGQGLIPC HAGPLEQVGW GWYVLSPQPW120
QPCPLGKVIS DL 132

(2) INFORMATION ON SEQ ID NO. 202:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 131 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

RLFIGCSLQN KQRWDWGPSL GPCTPLSRAY NHVHRPGRGP ALCPTKSSLH QSSWSPPLRD 60
PAQLPRSWG I GTRVPWRVQE MRRIPCTLRR TPTPELWSRG HCERRQERH VEDTLTDPVG120
SGRAEDRHTK P 131

(2) INFORMATION ON SEQ ID NO. 203:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 76 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

LAAIKDQLEG VQQALSQAAP IPEEDTDTEE GDDFELLDQS ELDQIESELG LTQDQEAQ60
QNKKSSGFLS NLLGGH 76

(2) INFORMATION ON SEQ ID NO. 204:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 102 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

RVCSKHFLRL PPSQKRTQTL KKVMTLNYLT SQSWIKLRVN WDLHKTRKQK HSKIRSLQVS 60
FQICWEAINL GISLQQSTKN TTKISNKKKK KKRKRKKLNC KL 102

(2) INFORMATION ON SEQ ID NO. 205:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 80 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

ICLHHNHCLC DTQLLAFYGL IPPTARLEMA VNGACFFTNK PKSTTAEITW KRFSLSRVLK60
YTFKEFPKKL ILIVFPKSFN 80

(2) INFORMATION ON SEQ ID NO. 206:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 76 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

GKPAALEAHQ GSRLOGRSRE QAAIPPLLSS RTQLCGLGFL FAGLAPCTRL VLELEGPILP60
RGDSQGCRCI GWRRVL 76

(2) INFORMATION ON SEQ ID NO. 207:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 72 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

NLRVSQLPWK PTRAPDCREE AGSRQPYLHS CPQGLSCVAL DFFLRDLRPA GHWCWSWRVL60
SCPGVTPRVA GG 72

(2) INFORMATION ON SEQ ID NO. 208:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 73 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

PGMSSLQDRH GRTIWFQVGP YCSHRQRPQE ADGWKRGVTI TGVVMLRVCL DPPRTTFLR60
 VTPLPSHASQ GCS 73

(2) INFORMATION ON SEQ ID NO. 209:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 182 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 209:

QRWLWTSSTS PCWIRAFLLP AGQVWPCSLG RAPAPLTTLO LTMQLMPKLW CPVCSSPGSH 60
 CHLQRGSLLR PTLHLAPPW LLAWPNLAFC AMLELELLF FRGGNRVESG KGLAPKCCCC120
 GFFAFSKDAL PGPQLQTAVL SKQVRS LGFG AHL LSGSISI LLLATSGQRP PQPHIARCWQ180
 KG 182

(2) INFORMATION ON SEQ ID NO. 210:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 130 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 210:

VGPGKQPWWG QVKQCGSQQG TPLKVAVAPR AAAHWTPQLW HQLHGELQSG QRGWGPAKRA 60
 RPDLPGRQE GPDPARSRG SPQPPLLLIA TGTSGDRLCS WESRSPGFVG LPAGDRHVSH120
 RERPGSRPQL 130

(2) INFORMATION ON SEQ ID NO. 211:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 111 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 211:

VTGKGRDPGL SCSSSWKRWs RTVTIHADTE QQYETEQLRA VSSSAEAAWA ATPPFCNHMP 60
 MSPPHLTSRW GWMAEQMKPA LWRGSLTEMH TFMGEVDGHL TSLMFHTVDC T 111

(2) INFORMATION ON SEQ ID NO. 212:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 243 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 212:

DVQVAGPEPD CRVHSHVLPQ QAHRLAPGPY SVGESLQPRE GCEDCDRQKA NLRIRFKPSL 60
 FQHVGTSSSL AGKIQKLKDK DFGKQALRKE HVNPPAEVST SLKTYQHFTL EKAYLREDF120
 WAFTPAAGDF IRFRFFQPLR LERFFFRSGN IEHPEDKLFN TSVEVLFPDN PQSDKEALQE180
 GRTATLRYPR SPDGYLQIGS FYKGVAEGEV DPAFGPLEAL RLSIQTDSPV WWILSEIFLK240
 KAD 243

(2) INFORMATION ON SEQ ID NO. 213:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 244 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 213:

GRTGVSVMVG IPSVRREVHS YLTDTLHSLI SELSPQEKED SVIVVLIAET DSQYTSVTE 60
NIKALFPTTEI HSGLLLEVISP SPHFYPDFSR LRESFGDPKE RVRWRKQNL DYCFLMMYAQ120
SKGIYYVQLE DDIVAKPNYL STMKNFALQQ PSEDWMILEF SQLGFIGKMF KSLDLSLIVE180
FILMFYRDKP IDWLLDHILW VKVCNPEKDA KTVTGRKPTC GSASNRPSSS TWALTPRWLA240
RSRN 244

(2) INFORMATION ON SEQ ID NO. 214:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 210 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 214:

PAESQPADPL QTVPLPARGH SLLAGWQDPE TEGQRLWKAG AAEGACEPAS RGEHEPEDIP 60
ALHPGESLPA RGLLLGLHPC RGGLHPLPLL PTSKTGAVLL PQWEHRAPGG QALQHVCGGA120
ALRQPSVRQG GPAGGPHRHP PVPSEPRRLP PDRLLLQSGS RGRGGPSLRP SGSTAPLDPD180
GLPCVGDSE DLPEKGRLLSC GLLRVPCGQP 210

(2) INFORMATION ON SEQ ID NO. 215:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 128 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 215:

GGAGLVHGS A DWPC LAPWRV SSCFLPGTEL RGLGAPGAKS RLWCRGGGSL LNRHPEVLLR 60
 CWVHP EWHGE QLWPFVLLPRP VLGKLSSGPS LQRPRMGWVW GTHGEWPEEL RVKRAPVCWL120
 QRP G APLS 128

(2) INFORMATION ON SEQ ID NO. 216:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 124 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 216:

FPQDWPRKEH RPQLLPVPLR VDPASQEHLR VSVKRQASTP APEPALSSRC PQTPQLCARQ 60
 EAARHTPGRQ ARPVRGPMDK PSPASGKTGP FPGTHAPELW QIAGAIVWGE FNKSPFENEK120
 KKKK 124

(2) INFORMATION ON SEQ ID NO. 217:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 142 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 217:

VPHTHPILGL CKEGPELSFP RTGLGRSTGH SCSPCHSGWT QHLRSTSGCR LRDRPPPLHQ 60
 SLLAPGAPR PRSSVPGKKQ LDTRQGAHKG QSADPWTSPA PPQKGQGLSL QDTPQSCGRL120
 QEPSCGENLI KALLKMKKKK KK 142

(2) INFORMATION ON SEQ ID NO. 218:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 379 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 218:

RRGLEGFNGG WTEMPGILWM EPTQPPDFAL AYRPSFPEDR EPQIPYPEPT WPPPLSAPRV 60
 PYHSSVLSVT RPYVVSATHP TLPSAHQPPV IPATHPALSR DHQIPVIAAN YPDLP SAYQP120
 GILSVSHSAQ PPAHQPPMIS TKYPELFP AH QSPMFPDTRV AGTQTTTHLP GIPPNHAPLV180
 TTLGAQRPPQ APDALVLRTO ATQLPIIPTA QPSLTTSRS PVSPA HQISV PAATQPAALP240
 TLLPSQSPTN QTSPISP THP HSKAPQIPRE DGSPK LALW LPSPAPTAAP TALGEAGLAE300
 HSQRDDRLL VALLVPTCVF LVL LALGIV YCTRCGPHAP NKRTDCYRW VIHAGSKSPT360
 EPMPPRGSLT GVQTCRTSV 379

(2) INFORMATION ON SEQ ID NO. 219:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 157 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 219:

VDTDECQIAG VCQQMCVNYV GGFECYCSEG HELEADGISC SPAGAMGAQG SQDLGDELDD 60
 DGEDEEDEDE AWKASTVAGR RCLGSCGWSL RSRLTLPWPI DRASQRTESH RYPTRSPPGH120
 PRSVPPGSPT TPQCSPSPGL WWSLPRIPHC LLPTSLL 157

(2) INFORMATION ON SEQ ID NO. 220:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 211 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 220:

PPPPGPLCLL PIKSLCLLPP SPQSPPPSCP LRAPLTRPHP SALHIPKPKP PKSQGKMAPV 60
 PSWPCGCPHQ LPQQPQQFWG RLVLPSTARG MTGGCWWHSW CQRVSFWWSC LHWASCTAPA120
 VAPMHPTSAS LTAIAGSSML GARAQONPCP PGAASQGCRP AEPACDGVQT PLMEYGALDT180
 WPGLHQGPMG AAQLDRWLPA PQAQPGSSLN H 211

(2) INFORMATION ON SEQ ID NO. 221:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 117 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 221:

LGE PQISGAQ PGRVWGQLCQ STSQAHPPLG MPWDHGQGRL WGSETPLLST PSQNTLRVSG 60
 LWREWGGRAKN WHLPREGDER FALILREASE KCFKVCVMRQ AVSGGGLSSP LPPSFPA 117

(2) INFORMATION ON SEQ ID NO. 222:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 198 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 222:

NKELSSSLKSS DVVMTHTESC ITVASRATHL FGLSDGHSFT TQQQTPHTGT RMSASTWEAV 60
 AEPGRWPQPD HGLSGAGHQG VRVPMLPQGV GMTGRSLVTR QWTSLGEGWR ERAGQAPAAH120
 RLAHANTLKA LLGGFSENQG EALVSFPRKV PILPPAPLSP EPRDPQGVLA GGAKQRCCLRP180
 PEPSLPMIPR HARQGVGL 198

(2) INFORMATION ON SEQ ID NO. 223:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 223:

SHGMPGRGWA CEVDWHSCPH TLPGWAPFIW GSPSQHGVLG ACPGPFTRTE APHPLSHFSR60
 WKTQRRKRPW GGVPSCLQLA PWVPLCGGSP DSISSASE 98

(2) INFORMATION ON SEQ ID NO. 224:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 298 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 224:

ATRRRAAEAG MAAVLQQRVER LSNRVVRVLG CNPGPMTLQG TNTYLVGTGP RRILIDTGEP 60
 AIPEYISCLK QALTEFNDAI QEIVVTHWHR DHSGGIGDIC KSINNDTTYC IKKLPRNPQR120
 EEIIGNGEQQ YVYLKDG DVI KTEGATLRVL YTPGHTDDHM ALLLEENAI FSGDCILGEG180
 TTVFEDLYDY MNSLKELLKI KADIIYPGHG FVIHNAEAKI QQYISHRNIR EQQILTFLFRE240
 NFEKSFTVME LVKIIYKNTF ENLHEMAKHN LLLHLKKLEK EGKIFSNTDP DKKWKAHL 298

(2) INFORMATION ON SEQ ID NO. 225:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 58 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 225:

GFSWGRSPLG RCWCLGGSWD PGYSPTHARL DWTAARRAAV QQFFPPQPPA GVSPIWIL 58

(2) INFORMATION ON SEQ ID NO. 226:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 73 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 226:

SGSLSLNHIS IFQINILLLS ISYNFFSLRI PWEFFNAIGS VIIDAFTNIS YASRMISVPV60
SHYNFLDCCV KFS 73

(2) INFORMATION ON SEQ ID NO. 227:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 141 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 227:

AFLLRPSVTA STRLLPVCAS PRSSPGPSPA QQQQAWQQAW SSARAPSRCR ARPSSSERPC 60
PAVGRLASLY CCCMVFASPP RPGRTWVHCT GWPRLATGLW PLTCQVWGTP RKQQPLPLL120
SWPLAASWRL WWMPWSWAPR L 141

(2) INFORMATION ON SEQ ID NO. 228:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 244 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 228:

VPPPALGHRQ HAPASRLRES TQLPRPFTST AAAGMAASVE QREGTIQVQG QALFFREALP 60
GSGQARFSVL LLHGIRFSSE TWQNLGTLHR LAQAGYRAVA IDLPGLGHSK EAAAPAPIGE120
LAPGSFLAAV VDALELGPPV VISPSLSGMY SLPFLTAPGS QLPGFVPVAP ICTDKINAAN180
YASVKTPALI VYGDQDPMGQ TSFEHLKQLP NHRVLMKGA GHPCYLDKPE EWHTGLLDL240
QGLQ 244

(2) INFORMATION ON SEQ ID NO. 229:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 144 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 229:

WTDHNRGAQL QGIHHSRQEA ARGQLPNRGR GCCFLGVPQT WQVNGHSPVA SLGQPVQCTQ 60
 VLPGLGGEAN TMQQQYREAS LPTAGQGLSE EEGLALHLDG ALALLHACCH ACCCCAGEGP120
 GELRGLAQTG SRRVLAVTEG RRRN 144

(2) INFORMATION ON SEQ ID NO. 230:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 135 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 230:

LEFFIPCLGS VNEACLFPGV SFHGLYFSSS SGSFAGSSLW KLHERWLGLG FAGVYSRVKA 60
 EWDLRPRLGT TQAEKGRFHH SQCPHSTTS ARAPPSLLPH PAIVRGATVG RRVPRRGLFL120
 LPVPEKAFPL LKFKH 135

(2) INFORMATION ON SEQ ID NO. 231:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 231:

GGPVCWEPQV TPFSSYSVPG ASCPPLQILG KENVYVAGYC MVTSEGRPLG THLPTAAQAR60
AQAHLLVLRP QIKPSPHHMA SDRFLPSRKF CGCAVL 96

(2) INFORMATION ON SEQ ID NO. 232:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 83 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 232:

CCGEGTVNDG NVPSQPGSCL TWVSNPTLPS PWSTLQRSRG PANAREVSTE KSLQNSHWKR60
RNKGHGKKPQ GRDRPRSQTL GRE 83

(2) INFORMATION ON SEQ ID NO. 233:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 52 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 233:

ASPASLAQAT SRQPAPSPRA RSHLATSTSW TSSARSDAGC GECRRDPGAP PR 52

(2) INFORMATION ON SEQ ID NO. 234:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 234:

LGSAWQQLRR PEASETLRLV GTHRPRQAL PRQVASPPP RRGGLTSPE VRLGQVVPGL60
 MPGVVSAAGT QVRRLEVPFA SLRLQHHLQL REGL 94

(2) INFORMATION ON SEQ ID NO. 235:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 95 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 235:

ARPSRSWRWC CSRSDAGTSS RRRTWVPAAL TTPGIRPGTT CPRRTGGEVR PSPRRGGGLA60
 TRCLGKARWR GLCVPTSRRV SDASGRRSCC QAEPR 95

(2) INFORMATION ON SEQ ID NO. 236:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 174 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 236:

APTNRSSSK FATSGSPGYP IASSGASPEV RQRRTTFFRF RPPGESLCGDM KLLTHNLLSS 60
HVRGVGSRGF PLRLQATEVR ICPVEFNPNF VARMIPKVEW SAFLEAADNL RLIQVPKGPV120
EGYEENEEFL RTMHLLLEV EVIEGTLOCP ESGRMFPISR GIPNMLLSEE ETES 174

(2) INFORMATION ON SEQ ID NO. 237:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 225 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 237:

YRAQKHCVWC HWVKGWGYTR QNSETGYRST KIHSHNKKNW RLAQSTLSFL FTQQHVGDPA 60
ADGEHTSRFR ALQGALYHFH LQQQVHVGPQ KLLILLISLN RPFRLDQTQ VIGRLQERRP120
LHFRYHTRHE VGVEFHRA DT DLGGLEAQGE ATGPHPPHMR AQQIVGKQFH VAAQTLARPE180
PEKGRPPLPH FRGCSTRCYW IARRTGSGEL AGTSRVCGSS FLYAN 225

(2) INFORMATION ON SEQ ID NO. 238:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 209 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 238:

TFNEKKIYNT ELKNTVEGVI GSRVGDTHGR IRKQGIDQQK YTVITRKTGA WHNQLSVSSS 60
LSSMLGIPRL MGNIRPDSGH CRVPSITSTS SSRWCMVLRN SSFSSYPSTG PFGTWIRRL120
SAASRNADHS TLGIIRATKL GLNSTGQIRT SVAWRRRGKP RDPTPRTCEL SRLWVSSFMS180
PHKLSPPGRN KKVVLRLCLTS GDAPLDAIG 209

(2) INFORMATION ON SEQ ID NO. 239:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 146 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 239:

INAFSHRNAK ININPPDAVA AALRPKSQRP RLTIKVFSE SVGVSVNGCA LGGTVERCAK 60
 SELQTIGQGH GVATRRRLSA GAPPRTHSQQ SSHWHEELKNK HLQGRGKRPR SRRSRARASA120
 ARGAPTGSQR GGSPKRARSG RSRVLA 146

(2) INFORMATION ON SEQ ID NO. 240:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 134 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 240:

SRTFSFLSFL HCANILTLFV SFQEPHRHIQ VKRSLNKCLQ PSQCKNKYQS SRRSSSRAAP 60
 KVPTATPNNY KSVQRECREW CEWVCAGGHG GAVCKIGVAN HRTRAWSGYP PPTQRGRASP120
 HTLTAEFALG RVKK 134

(2) INFORMATION ON SEQ ID NO. 241:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 241:

PARTDRPELL ARFGLPPRCE PVGAPLAALA LARERRERGR FPRPCKCLFF NSSQCELCCE 60
CVRGGAPALS RRRVATPCPC PMVCNSDFAH RSTVPPSAHP FTLTPTLSLN TFIIVRRGRW120
DFGRSAAATA SGGLIFIFAL RWLKAFI 147

(2) INFORMATION ON SEQ ID NO. 242:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 88 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 242:

PVLCRGNSSGS LSRKFPPKPQ KPADKDHPT CVYLENRSPG KSDLSATPGR SGLESGYQNL60
LRQHQPGRGRC PTWPGSRWKV PRRFPGYG 88

(2) INFORMATION ON SEQ ID NO. 243:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 164 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 243:

QDGCPSGDF AALQSLLKAS SKDVVRQLCQ ESFSSSALGL KKLLDVTCS LSVTQEEAAE 60
LLQALHRLTR LVAFRDLSSA EAILALFEN FHQNLKNLLT KIILEHVSTW RTEAQANQIS120
LPRLVDLDWR VDIKTSSDSI SRMAVAPPGL VPDGRFQGGG QAMG 164

(2) INFORMATION ON SEQ ID NO. 244:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 87 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 244:

FAWASVLQVD TCSRMIFVSR FLRFWWKFSG KRARIASAED RSRNATSLVR RCRAWSSSSA60
SSWVTDKLEH VTSKSFFKPR AELEKLS 87

(2) INFORMATION ON SEQ ID NO. 245:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 129 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 245:

DGPGGPTAHP HRCAPPGVC PGQAPAHLLL CAAAPGHPGQ GQPPAAGGLV GDADRAGDLE 60
CSPRRIFLHP RLHPPRHLGS CHLDRCGCGCA GWSCCLHLRE TGWYILGPAE DSASAGSFLH120
SHRCPQTL 129

(2) INFORMATION ON SEQ ID NO. 246:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 268 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 246:

```
ASPSNSQPTS PASAPALPPP ARSRGAQTV SLTMGTADSD EMAPEAPQHT HIDVHIHQES 60
ALAKLLLTCC SALRPRATQA RGSSRLLVAS WVMQIVLGIL SAVLGGFFYI RDTLLVTSG120
AAIWTGAVAV LAGAAFIYE KRGGTYWALL RTLLALAAFS TAIAALKLWN EDFRYGYSYY180
NSACRISSSS DWNTPTPTQS PEEVRLHLC TSFMDMLKAL FRTLQAMLLG VWILLLLASL240
APLWLYCWRM FPTKGKRDQK EMLEVSGI 268
```

(2) INFORMATION ON SEQ ID NO. 247:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 103 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 247:

```
DCTQDPQHDL HHPRGHQPPA AAPGLGGPGP QRRAGEQEL GQGRLLVDVH IDVGVLWGLR 60
GHLITVGCSS CQGHSLRSSG PASGRREGWG AGWRSGLRVG GGG 103
```

(2) INFORMATION ON SEQ ID NO. 248:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 86 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 248:

GSRRRDGGGA GAAPVAPRAL GRRARAGRCS EDEGGGGAQR VWGEQPVLAS GQSPPGQEGS60
 FTRVWTRASL PTLGQVLQPG GVHVQV 86

(2) INFORMATION ON SEQ ID NO. 249:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 154 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 249:

ARGGAMAAGL ARLLLLLGLS AGGPAPAGAA KMKVVEEPNA FGVNNPFLPQ ASRLQAKRDP 60
 SPVSGPVHLF RLSGKCFSLV ESTYKYEFCF FHNVTQHEQT FRWNAYSGIL GIWHEWEIAN120
 NTFTGMWMRD GDDCRSRSRQ SKVELACASP SNCV 154

(2) INFORMATION ON SEQ ID NO. 250:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 95 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 250:

PLDAVARART RQLHLALPAP GTAVVTVPHP HAREGVVGD L PLVPDAEDPT VGVPAEGLLV60
 LGHVVERAEL ILVRGLHQAE ALARESEEMH GSRHG 95

(2) INFORMATION ON SEQ ID NO. 251:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 240 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 251:

KVTDGHTRTP RSGVPRQHEA GSPGLTASHA MSIHLAGSLT AMDSICASER SQGVWRAPTP 60
GCQGLSPGPR PGELPGGSSP EERLGRlava GPPRGAQNVs QAGPEAEAPP LRFGHAWGAQ120
TPRLGAPGPW TPLPTLPsHI PPFWsQTPAQ RKEGFTEEGQ GRAWPQGGDE DISGPGsCRL180
LWEEEPsCVCK LLGLAARPTA GPSLDPCTWP SSCPLAAPGL GTGIEPRGLG WLQGQRDREG240

(2) INFORMATION ON SEQ ID NO. 252:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 216 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 252:

GLVMPGELRR PGLGPQAHGL PSPLCPPIFP LFGPRHQHKE RRGsQRKARA EPGPREGMRT 60
FPVQVAAGCS GRKSHASVNC WGWRPAPLQG PALTPARGHP AALWLPLALA QASSLEGWAG120
WARAGTGRGS TSDPDVGWLC PPRREAQQTs YTKAKSTIGE PRSHFMGRRP RPQGFPQsKAR180
GRFIPEDSPP GAAPAWGGVS RPLGCLsVCG TPWSTP 216

(2) INFORMATION ON SEQ ID NO. 253:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 218 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 253:

VLRLLYIYIL YITNMKWFST QPLWLNTKQR SHRRGPGPPP APLSGVLGSR GLPHHPSQGW 60
GRAGPRAGAN VAWNSNCIVR WVGGQWARGC SQPGPFTTNL AMTCGGPWGS GCLLGSTLSE120
VSPWAPPSCP QGHPVLPTLRL WAWGLQDPLC RVRVGAGHGS RHQPDAPGVV ARSWDGVVRN180
TAPKTQNKNT TNGRRSPPT EVGFEPPLIF PVSFLQPW 218

(2) INFORMATION ON SEQ ID NO. 254:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 254:

RDGGGAGAAP VAPRALGRRA RAGRCSEDEG GGAQRVWVS SLAGWRLERG TARARSPLTL60
PLPVGGTTRS CLRFPVASRP 79

(2) INFORMATION ON SEQ ID NO. 255:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 255:

LGLEATGLRQ ERVVPPTGSG KVSGERARAV PRSSRQPARL LTQTRWAPPP PSSSLHLPAR60
ARRPRARGAT GAAPAPPPS 79

(2) INFORMATION ON SEQ ID NO. 256:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 79 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 256:

WPGGDWPEAR TGCSTYGKRQ GQRGTGPGRP PLEPPAREAA HPNALGSSTT FIFAAPAGAG60
PPAESPRSNR SRASPAAIA 79

(2) INFORMATION ON SEQ ID NO. 257:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 51 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 257:

GHLGGPTGSV CSRILLASSP FYMNCCINKH RVPETTEVII LPTECWPGQA W 51

(2) INFORMATION ON SEQ ID NO. 258:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 49 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 258:

GGGFLGQIDK SKDNISLVTV IQLHSYTVAL FGLSHEEVLV TNYVFGCF

49

(2) INFORMATION ON SEQ ID NO. 259:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 48 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 259:

AFTRNTTNKV SDMLANQARL RSLRRPNWLC LLKDSSGLVS ILHELLHK

48

(2) INFORMATION ON SEQ ID NO. 260:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 179 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 260:

PGISVSVDKM ESSPFNRRQW TSLSLRVTA ELVLNKNKS SAIVEIFSKY QKAAEETNME 60
KKRSNTENLS QHFRKGTTLV LKKKWENPGL GAESHTDSL R NSSTEIRHRA DHPPAEVTSH120
AASGAKADQE EQIHPRSLR SPPEALVQGR YPHIKDGEDL KDHSTESK KM ENCLGESRH 179

(2) INFORMATION ON SEQ ID NO. 261:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 56 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 261:

QATLLLEPKL TKKNKSTPDL DSGHLLKPSF RVDIPTSRTV RILKTTQQKV KKWKIV 56

(2) INFORMATION ON SEQ ID NO. 262:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 262:

DSAPSPGFSSH FFFENTVRVPF LKCWERFSVL LLFFSMFVSS AAFWYLENIS TIADDLFLLT60
 RESSLAVTLN DSEVHCRLLN GDSILSTDT EIPG 94

(2) INFORMATION ON SEQ ID NO. 263:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 263:

VMSDPADKAA RADSARAARG KRKKNVEENM AYSALMEVAG YCLIERMLWN PMLKIKSVWL60
CSYAVMVIPR QLAKV 75

(2) INFORMATION ON SEQ ID NO. 264:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 74 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 264:

AMFSSTFFFL LPRAARAESA RAALSAGSLI TYAFYKRLPK KKLLTRNVOK PLKANKQQTV60
VFAFSYSWQA EVRA 74

(2) INFORMATION ON SEQ ID NO. 265:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 63 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 265:

DSKAFSLLSS NQPLPSKLSR PCFPPHFFFF YLEPLEPNRL EPPCLLDHSS PTHFIKGYPK60
RNC 63

(2) INFORMATION ON SEQ ID NO. 266:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 266:

RRGSGSRSSM APVLASMLWM STRGTAMTST SLCTSRARSR PMPSSSSPTP TAWRCCCATR60
 TRVSTSTRTG ASLRMWCCSG GRCLLLWPTS APTR 94

(2) INFORMATION ON SEQ ID NO. 267:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 254 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 267:

GDRKPLYHYG RGMNPADKPA WAREVKERTR MNKQQNSPLA KSKPGSTGPE PPSPQASPGP 60
 PGLPWAPKPY HKFMAFKSFA DLPHRPLLVD LTVEEGQRLK VIYGSSAGFH AVDVDGNSY120
 DIYIPVHIQS QITPHAIIFL PNTDGMEMLL CYEDEGVYVN TYGRIIKDVV LQWGEMPTSV180
 AYICSNQIMG WGEKAIEIRS VETGHLDGVE MHKRAQLKF LCERNDKVFF ASVRSGGSSQ240
 VYFMTLNRNC IMNW 254

(2) INFORMATION ON SEQ ID NO. 268:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 231 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 268:

```
GKKHLVIPLT QELEPLSSFV HEDPVEVARL HRA DLNGFLT PAHYLVGADV GHRSRHLPPL 60
QHHLNDAPV RVDVDTLVLV AQQHLHAVGV GEEDDGMGRD LALDVHRDVD VIAVPRVDIH120
SMEASTGAID DLEPLPLLYC QVDQQRAGE VGKGLEGEHF VVGFGGPGEA WGPWGGLGAG180
GLRPRAAWLA LGQGRVLLLH HPCSLEYLSG PGWVFSGIHA PTIMVQGLPV P 231
```

(2) INFORMATION ON SEQ ID NO. 269:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 454 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 269:

```
GAGCTSPGLW ARKAAARCLP TYPSTRAQPSN VGRRRRRRPG LGALAAGVPA MAESVERLQQ 60
RVQELERELA QERSLQVPRS GDGGGGRRVRI EKMSSEVVDS NPYSRLMALK RMGIVSDYEK120
IRTFAVAIVG VGGVGSVTAE MLTRCGIGKL LLFDYDKVEL ANMNRLFFQP HQAGLSKVQA180
AEHTLRNINP DVLFEVHNYN ITTVENFQHF MDRISNGGLE EGKPVDLVLS CVDNFEARMT240
INTACNELGQ TWMESEVSEN AVSGHIQLII PGESACFACA PPLVVAANID EKTILKREGVC300
AASLPTTMGV VAGILVQNVL KFLNFGTVS FYLGYNAMQD FFPTMSMKPN PQCDNRNCRK360
QQEYKKKVA ALPKQEVIOE EEEIHEDNE WGIELVSEVS EEELKNFSGP VPDLP EGITV420
AYTIPKKQED SVTELTVEDS GESLEDLMK MKNM 454
```

(2) INFORMATION ON SEQ ID NO. 270:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 123 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 270:

KLTVPKFNRN FNTFCTKIPA TTPIVVGRLA AQTPSRFRVF SSIFAATTSG GAHAKQADSP 60
GIISCICPET AFSLTPDSIH VCPSSLQAVF IVIRASKLST QLRTRSTGFP SSNPPLLILS120
MKC 123

(2) INFORMATION ON SEQ ID NO. 271:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 176 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 271:

CSSEYVLLLE LYLILLDEVG RKVYSYWLVP PCHNQRVATY QCHILSAFQQ SHYLLHQHLL 60
LLRQRYGFSH SRLQFPFVSM PSSGCRDSP PPLSSSSRCG PGRPLRRRSS GPADSSPGQV120
PAPAPGPAAG GAPQTPPWLG LRPPTLPARA FAAAFAPRCS AGPARGTWGG TSPLPS 176

(2) INFORMATION ON SEQ ID NO. 272:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 117 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 272:

EARQAWTGAK GAGSLTFSSL QSGHLASGSQ SPESTKAPGT PPTPSYPGTP SRQLLWQWVQ 60
PRPALPASSP CSRHQLYLPR QAMSWLLSPA PSVPLDFSGA SPVWATLCFP HPRLPHR 117

(2) INFORMATION ON SEQ ID NO. 273:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 86 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 273:

APALPPPAGN VLASQPSTIC SPRLLRGQPS LGHPLFPSSS APTQVTDPAD SFSLGKVGCC60
LTSPSSPPPI HTHRHPPTPG RLVSHM 86

(2) INFORMATION ON SEQ ID NO. 274:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 177 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 274:

EARTLPAGGG RAGAYCRERR LAVLAWAGPT AITVAYLGSL GRMEWVCQG LWCFLVIGTL 60
MPSAHFAKKK KLMTLLPWLL SMLAWPPRVG GTSPLLAEAG EQVLSYDPIH QAGVLSPSGH120
HSSQHQPVG LGQGSEKGWQ EVPRSSQPGR GTNALNTSKL RDPKVSTPGS GLPPHRH 177

(2) INFORMATION ON SEQ ID NO. 275:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 275:

QFPGPSVPEQ STSVSVTTSC LFPSLHLLQF IYMLLLLHVH CLPYQAVNEG RNLVCFIH60
 VPSAWHIVGL H 71

(2) INFORMATION ON SEQ ID NO. 276:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 102 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 276:

FFFFFFFF FFFCLINMSI YLAPDGNTKS WQWEWKGSLS QILPYYVDPK AGLGSKAHKP 60
 PKQIFIEHLD YYRPSILLGT MGDVKEVISH MICLQAKNA SG 102

(2) INFORMATION ON SEQ ID NO. 277:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 65 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 277:

GVIESRRVLS RGVIRFIFKQ PNPGRCGPIL SALKKIPFPY LPASIMSVEE SNCGSFEGDG60
PFFPV 65

(2) INFORMATION ON SEQ ID NO. 278:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 65 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 278:

FFFFFFFFFF FFLFNKYEHL FGTRWQYKIL AVGVERFSL SNTSILCRPKG RTWQQGSQTT60
QTNIY 65

(2) INFORMATION ON SEQ ID NO. 279:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 489 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 279:

LADSFPGSSP YEGYNYGSFE NVSGSTDGLV DSAGTGDLSG GYQGRSFEPV GTRPRVDSMS 60
SVEEDDYDTL TDIDSDKNVI RTKQYLYVAD LARKDKRVLR KKYQIYFJNI ATIAVFYALP120
VVQLVITYQT VVNVTGNQDI CYYNFLCAHP LGNLSAFNNI LSNLGYILLG LLFLLIILQR180
EINHNRALLR NDLCALECGI PKHFGLFYAM GTALMMEGLL SACDHVCPNY TNFQFDTSMF240
YMIAGLCMLK LYQKRHPDIN ASAYSAYACL AIVIFFSVLG VVFGKGNTAF WIVFSIIHII300
ATLLLSTQLY YMGRWKLD SG IFRRILHVLY TDCIRQCSGP LYVDRMVLLV MGNVINWSLA360
AYGLIMRPND FASYLLAIGI CNLLLYFAFY IIMKLRSGER IKLIPLLCIV CTSVVWGFAL420
FFFFQGLSTW QKTPAESREH NRDCILLDF DDHDIWHFLS SIAMFGSFLV LLTDDDDLD480
VQRDKIYVF 489

(2) INFORMATION ON SEQ ID NO. 280:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 182 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 280:

```
APLCHRPVTL SCCGDESQHR CPALDGSRTA RSSLGAWDS HGVAWNLAAA LCRGAGLLPW 60
DPQMLAKLLL SSQCWGLPWA PVLWLSICPF ARGRMEGTPS PFHALHFARP PPHNAPAWDL120
RPLFPPILPL QGLVWGLNLC PVSGPQFSLG CPWLPSLPIP VSQDGWGYEI LGVGQLVPDF180
WC                                                    182
```

(2) INFORMATION ON SEQ ID NO. 281:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 536 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 281:

```
ARPGCPAAIQ CWAAVLGLIP TARQSDRSMT QRSSGPLEVK RRAQLLLEDI DLVPLHSIQV 60
VIQCQQHQEG PEHGDGGEEV PDVVVVKEVE EDAVPVVLPR LCRGFLPGAE SLEEEEEEREAL120
PDHGGANDAE QGDELDPLPT PELHDDVEGE VKEQVADANG QQVGSEIIGA HDKPIGSQRP180
VDDVAHDQQH HAVHVERPAA LPDAVCVEHV EDAAEDPRVQ FPPAHVIELR AEEQGGDDVN240
DGEDDPERRV PFAKDHAQHR EEDDNGQAGV GTVGAGVDVR VPLLVELQHA ESGDHVHERC300
VKLEIGIVGA HMIASTEQPL HHQGCAHGVE KPKVFGDPTF QGTEVIAQQG PVVVDLPLQD360
DEQEKQPQQD VPQVAEDVVE GAEIAQWVGA EEVVVADVLI PCDIHHRLVG DHQLHHRKGI420
EDSNGGNVPE VDLVLFQNT LVLPCQVSHI EVLLGANDIL VGIDVGQCVV VILLHRAHGV480
HSGPSTYRFK GAALVTVREV PSASAVNQTI GRSRNILKGA IVVTLIRGTA RKRISQ 536
```


(2) INFORMATION ON SEQ ID NO. 282:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 551 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 282:

PLSSPSCCRY RRCRRRLRPP LRSVVQPGPR TMSLSRSEEM HRLTENVYKT IMEQFNPSLR 60
 NFIAMGKNYE KALAGVTYAA KGYFDALVKM GELASESQGS KELGDVLFQM AEVHRQIQNQ120
 LEEMLKSFHN ELLTQLEQKV ELDSRYLSAA LKKYQTEQRS KGDALDKCQA ELKKLRKKSQ180
 GSKNPQKYSYD KELQYIDAIK NKQGELENYV SDGYKTALTE ERRRECFLVE KQCAVAKNSA240
 AYHSKGKELL AQKLPLWQQA CADPSKIPER AVQLMQQVAS NGATLPSALS ASKSNLVISD300
 PIPGAKPLPV PPELAPFVGR MSAQESTPIM NGVTGPDGED YSPWADRKAA QPKSLSPPPQS360
 QSKLSDSYSN TLPVRKSVTP KNSYATTENK TLPRSSSMAA GLERNGRMRV KAIFSHAAGD420
 NSTLLSFKEG DLITLLVPEA RDGWHYGESE KTKMRGWFPF SYTRVLDSGD SDRLHMSLQQ480
 GKSSSTGNLL DKDDLAIPPP DYGAASRAFP AQTASGFKQR PYSVAVPAFS QGLDDYGARS540
 MSSADVEVAR F 551

(2) INFORMATION ON SEQ ID NO. 283:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 185 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 283:

AGEAAGQPGS PPSHQLAKCP PLTQGYPR LH GHVTRGVYPQ EAAPQPWAAQ PLGLALQGPA 60
 PHSARPCLEQ LGSSPGQTQV GQDQAAGAWM FSTQERTDDD RTGYMGRAGE ATRWAALQMW120
 PSAEEGGRPV VGHCRQLQDV GKGILTLVRR LRIWFLPHRR CSWTALHSHP GPGRRRARPH180
 CRASA 185

(2) INFORMATION ON SEQ ID NO. 284:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 518 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 284:

```

SGGSESGHFH IGAAHGPRSI VIQALGEGGH GHTVGPLLEA AGRLGGEGPG GGAVIGGWGDG 60
QVVLVQEVAR AAALPLLQAH VQPVTAIAVQ DPGVGEGKPA PHLGLLTLSV VPAIAGLRHQ120
QGNEVTLLA QEGAVVPSSV GEDGLHPHTA IALQAGCHGA RARQSLVLGG GIAVFWGHAL180
AHGECVGVGV AELALRLRRR QGFGLGSLAV SPRAVVLAIR ACDAVHDGCA LLGRHPPHER240
CQLGGHRQGL GPRNGVGNDQ VGLGGRQGAG EGGAVAGHLL HELHRALRDL AGVGTGLLPQ300
RQLLRQQLLA LGVVGRGVLG HGALLHQEA EAPALLCQCG LVAVGHVILQ LALLVADGVD360
VLQLLVRVLL RILAALALLP KLLQLSLTLV QGVAFAPLLS LVFLQRSTQI PGVQLHLLQ420
LRKQLVVKRL QHFFQLILD L PVDFFSHLEEN VSEFFGALAL AGQLPHLHQG VKVAFGCIRH480
TCQCLLVILP HGDEVPEARV ELLHDGLIDI FREPVHLL 518

```

(2) INFORMATION ON SEQ ID NO. 285:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 217 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 285:

```

VREAAARREQR YQEQQGEASP QRTWEQQQEV VSRNRNEQES AVHPREIFKQ KERAMSTTSI 60
SSPQPGKLRS PFLQKQLTQP ETHFGREPAA AISRPADLP AEPPAPSTPP CLVQAEAAV120
YEEPPEQETF YEQPPLVQQQ GAGSEHIDHH IQQGGLSGQG LCARALYDQ AADDTEISFD180
PENLITGIEV IDEGWWRGYG PDGHFGMFPA NYVELIE 217

```

(2) INFORMATION ON SEQ ID NO. 286:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 162 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 286:

```

AGASGRLWLP SAFICLFSFS LASKGWWPPL FRMTLGNSER RELFLAEFVT KVRVDHGGLA 60
AGNLSCWSLL CAPHSISLSL CLGYGKWGCR WPSSHPGYSK TADTCSSTR LTRCLQAPVC120
ASTDSDFRKS NTEWPWPVVF PYFLSQLIRV SEEQICFWTK KK                      162

```

(2) INFORMATION ON SEQ ID NO. 287:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 173 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 287:

```

LLACRGWPGR RWHEELNSGK VMYAFCRVKD PNSGLPKFVL INWTGEGVND VRKGACASHV 60
STMASFLKGA HVTINARAE E DVEPECIMEK VAKASGANYS FHKESGRFQD VGPQAPVGSV120
YQKTNAVSEI KRVGKDSFWA KAEKEEENRR LEEKRRAEEA QRQWSRSAGS VSA          173

```

(2) INFORMATION ON SEQ ID NO. 288:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 597 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 288:

```

EKCGQYIQKG YSKLKIYNCE LENVAEFEGE TDFSOTFKLY RGKSDENEDP SVVGEFKGSF 60
RIYPLPDDPS VPAPPRQFRE LPDSVPQECT VRIYIVRGLE LQPQDNNGLC DPYIKITLGK120
KVIEDRDHYI PNTLNPVFGF MYELSCYLPQ EKDLKISVYD YDTFTRDEKV GETIIDLENR180
FLSRFGSHCG IPEEYCVSGV NTWRDQLRPT QLLQNVARFK GFPQPILSED GSRIYGGGRD240
YSLDEFEANK ILHQHLGAPE ERLALHILRT OGLVPEHVET RTLHSTFQPN ISQGKLMWV300
DVFPKSLGPP GPPFNITPRK AKKYYLRVII WNTKDVLDE KSITGEEMSD IYVKGWIPGN360
EENKQKTDVH YRSLDGEENF NWRVFVFPDY LPAEQLCIVA KKEHFWSIDQ TEFRIIPRLI420
IQIWDNDKFS LDDYLGFELE DLRHTIIPAK SPEKCRDMI PDLKAMNPLK AKTASLFEQK480
SMKGWWPCYA EKDGARVMAG KVENTLEILN EKEADERPAG KGRDEPNMNP KLDLPNRPET540
SFLWFTNPCK TMKFIVWRRF KWVIIGLLFL LILLFVAVL LYSLPNYLSM KIVKPNV 597

```

(2) INFORMATION ON SEQ ID NO. 289:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 120 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 289:

```

DQHSCFKMSP DSKASHNPSF PKMGVESOME DETTAWMNLK PTKSCTSTSG PLKSGLLFTS 60
SGLRGWSLST WKQGLCTAPS SPTFPRENER CGWMFSPRVW GHQALLSTSH PGKPRNTTCV120

```

(2) INFORMATION ON SEQ ID NO. 290:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 289 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 290:

```
ETQVVIQRKL VIVPYLNDQP GWDSKFRLVN TPEMLFFRND TELFGWKVVK RENKSPVKIP 60
FTIQRSVMDI CFLFVFFIAR NPAFDVDVTH FLSCDAFLVQ DNVLGVPDDH TQVVFLGFPG120
CDVERRAWWP QTLGENIHPH LKFSLGNVGL EGAVQSPCFH VLRDQPLSPE DVKSKPLFRG180
PEVLVQDFVG FKFIQAVVSS SISDSTPIFG KDGLWEAFES GDILKQLCWS QLISPGIDSR240
NTVLLWYAAV GPKAGKESVF QINNCFSYFF IPGKGVIID RNFQVFFLR 289
```

(2) INFORMATION ON SEQ ID NO. 291:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 201 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 291:

```
GTGDGSKEIN IVWGIQVPIF HNGPWVSTNH PVARFPRI TS LASEGIIVPS TSTIRGMGVW 60
RASCGDCRAD STSSIAQDRG PGLTIGHQAL GSLVWVGESW GQTWGEYLGG PRWLGLDLR120
QSWALSISEE VVKKRDFLFH FLNFLCMLVE DMFAHKLRTL EFLATERTQP LILAQFLRVG180
GDELLHFLW VFAPHLGLF L 201
```

(2) INFORMATION ON SEQ ID NO. 292:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 171 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 292:

```
SVIFFKIGFC EGRLVGRGGV PGSEAQSCVL SSSVWISLAA SLMSLRITCL CWVMPLMLRT 60
RRVRSLETPG LSSHRRRMF CRFQQISLML TLRSKVTQPR RKNLLSGWGS ESATRIKPGY120
LLQREMISAR EMLGAMLRMK REQVLCSGRG LHSSPAASLG FSHSSSLGFS F 171
```

(2) INFORMATION ON SEQ ID NO. 293:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 485 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 293:

EKEKPKEEWE EKPDAAGLE CKPRPLHKTC SLFMRNIAPN ISRAEIIISLC KRYPGFMRVA 60
 LSEQPERRF FRRGWVTFDR SVNKEICWN LQNI RLRECE LSPGVNRDLT RRVNRINGIT120
 QHKQIVRNDI KLAAKLIHTL DDRTQLWASE PGTPPLPTSL PSQNPILKNI TDYLIEEVSA180
 EEEELLGSSG GAPPEEPPKE GNPAEINVER DEKLIKVLDK LLLYLRIVHS LDYYNTCEYP240
 NEDEMPNRCG IIVHVRGPMPP NRISHGEVLE WQKTFEEKLT PLLSVRESLS EEEAQKMGRK300
 DPEQEVEKFV TSNTQELGKD KWLCPLSGKK FKGPEFVRKH IFNKHAEKIE EVKKEVAFFN360
 NFLTDAKRPA LPEIKPAQPP GPAQILPPGL TPGLPYPHQT PQGLMPYGQP RPPILGYGAG420
 AVRPAVPTGG PPYPHAPYGA GRGNYDAFRG QGGYPGKPRN RMVRGDPRAI VEYRDLDA PD480
 DVDFF 485

(2) INFORMATION ON SEQ ID NO. 294:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 368 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 294:

ESSGFQAIGR AEDDARSCWV KTSESTRPYQ LLRRRRPTLI TYRIFRHHRRH KDTSSGDHLT 60
 CRLDPAQAKDL KDGTQEEATK RQEAPVDPRP EGDPORTVIS WRGAVIEPEQ GTELPSRRAE120
 VPTKPPPLPPA RTQGTPVHLN YRQKGVIDVF LHAWKGYRKF AWGHDELKPV SRSFSEWFGL180
 GLTLIDALDT MWILGLRKEF EEARKWVSKK LHFEKDVDVN LFESTIRILG GLLSAYHLSG240
 DSLFLRKAED FGNRLMPAFR TPSKIPYSDV NIGTGVAHPP RWTSDSTVAE VTSIQLEFRE300
 LSRLTGDKKF QEAVEKVTQH IHGLSGKKDG LVPMFINTHS GPVSPTWGVF HGGAPGADSL360
 LLSYLFER 368

(2) INFORMATION ON SEQ ID NO. 295:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 94 amino acids
 (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 295:

ALRSPERMRI VLSNRLTSTS FSKCNFFDTH FLASSNSFLR PKIHMVSSAS ISVRPRPNHS60
LKDLDTGFSS SWPHANLRYP FHACRKTSIT PFWR 94

(2) INFORMATION ON SEQ ID NO. 296:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 94 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 296:

LLRHPLPGFL KFFPQTODPH GVQRVDQCET EAKPLTEGPG HRLQLVMAPC KLAVSFPCMQ60
EDVNHALLAI VQMHWCALCP GRWQGRLGGH FCSS 94

(2) INFORMATION ON SEQ ID NO. 297:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 146 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 297:

SGPLLAGPAT LTGRMSEVRL PPLRALDDFV LGSARLAAPD PCDFQRWCHR VINNLLYYQT 60

NYLLCFGIGL ALAGYVRPLH TLLSALVVAV ALGVLVWAAE TRALCAAAAA ATLQPAWPQC120
LPSASWCSGS RAALAPSCSA SPGRCF 146

(2) INFORMATION ON SEQ ID NO. 298:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 152 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 298:

TQRHSHPPFS MLIPKLGPGA RHSQILNPGP KLFQTPPYLP TQVKTLPNLE LRTQVFHAPV 60
 WMESGILTVG PLVQVIPTLT SPICLPPALL RHFAPHPNVP HHRQPRGEVG TGLSREWG VY120
 VSAATIKPV ASLMPKKKKK STGRKYSSSS RP 152

(2) INFORMATION ON SEQ ID NO. 299:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 172 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 299:

RTTTTTIFAA GRLFFFFWHE RCNRLYCCSN TNIYAPFFAE ACPHLTPWLS MVWNIGVRGK 60
 MPKQSWREAN GTGEGRDHLD QGSNSQDTRL HPHRGMEHLG SEFKIWQCLD LGWKVGVWGLE120
 KLWSRVQDLR VPCSRPQFGD EHGEWGMGVS LGSQFEIGHG CSGKLPQFWG WM 172

(2) INFORMATION ON SEQ ID NO. 300:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 178 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 300:

WFWRESYWQT IKVDLQVEHP YQFLLKYAQ LKGDKNKIQK LVQMAWTFVN DSLCTTSLQ 60
WEPEIIAVAV MYLAGRLCKF EIQEWTSKPM YRRWWEQFVQ DVPVDVLEDI CHQILDLYSQ120
GKQQMPHHTP HQLQQPPSPE PPTPLPGPCG CWASHLKEGK VVQPEPVEQC PVWPPKPK 178

(2) INFORMATION ON SEQ ID NO. 301:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 113 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 301:

CISQDVCANL KYKNGPPNPC IGDGGSSLFK MSRSTFWKTS ATKSWIFTHK ENNRCLITPP 60
ISCNSPHLLS LPPRCLGPVV AGPPTSRRGR LYSPNPWSNA LSGLQNQNKT GSL 113

(2) INFORMATION ON SEQ ID NO. 302:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 90 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 302:

GGRPSNHRAQ AAGWEAQEMG AVAADGGCDE ASVVFLVSKD PGFGGRCLPK RRPGHLEQTA60
PTISYTWVWR SILVFQICTN VLRDTSLLLL 90

(2) INFORMATION ON SEQ ID NO. 303:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 158 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 303:

TQVMVQSMFA PTDTSDMEAV WKEAKPEDLM DSKLRCVFEL PAENDKPHDV EINKIISTTA 60
 SKTETPIVSK SLSSSLDDTE VKKVMEECKR LQGEVQRLRE ENKQFKEEDG LMRKTVQSN120
 SPISALAPTG KEEGLSTRLL ALVVLFFIVG VIIGKIAL 158

(2) INFORMATION ON SEQ ID NO. 304:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 112 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 304:

VNKALPFISK ALGQSVNTRL SLMTSTSDAA TVQFLWASDS VHQSQGADGL DRTEDESSL 60
 GREWATWGLL CGADRTPOHA GLQLPKGQHQ QARKGVILRE VIQHHVPRPT NV 112

(2) INFORMATION ON SEQ ID NO. 305:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 105 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 305:

FKGKTCEMSS YINFFLHMVM INLNPMIWWI HQSNLPSCAC YLYKAIFPII TPTIKNKTTR 60
AKSRVLRPSS FPGVANAEMG LLLCTVFLIR SPSSSLNCLF SSRSL 105

(2) INFORMATION ON SEQ ID NO. 306:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 126 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 306:

RPPQRTLRRHS AQLGAAPAAL PQPLWELPRA HGSQRQPGPG EAADHAEQER EEAAERPGSS 60
PEEGQEGSGA FGGHTGHRAC ARCLGRGALG GRIPCGLLCQ LFRRDGC PAD SEVQHIIHQH120
WQQLLP 126

(2) INFORMATION ON SEQ ID NO. 307:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 240 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 307:

NVGRCCQAQA RAGAASLNAS LDGLHNALFA TQRSLEQHQR LFHSLFGNFQ GLMEANVSLD 60
 LGKLQTMLSR KGKKQKQDLE APRKRDKEA EPLVDIRVTG PVPALGAAL WEAGSPVAFY120
 ASFSEGTAAL QTVKFNTTYI NIGSSYFPEH GYFRAPERGV YLFAVSVEFG PGPQTGQLVF180
 GGHRTPTVCT TGQSGSTAT VFAMAELOKG ERVWFELTQG SITKRSLSGT AFGGFLMFKT240

(2) INFORMATION ON SEQ ID NO. 308:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 123 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 308:

KAGIEGHRGS CLPERRAQT WHRPCDEYVH QRLRFLLVPL PGSFQVFLLL LPFPAQHGLQ 60
 LPQVQADVGF HEPLEVPKEA VEEPLVLLQA ALSGEECVVE AVKGGVEGGG PGPGLGLAAP120
 PDI 123

(2) INFORMATION ON SEQ ID NO. 309:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 84 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 309:

PTTTLVIPLF FLSSRKQKQK DSFQTALCSL HCSFQQAAS TGKAHVVTPT FSEVLLFHGV60
 TLLSESKFRK QVLPLADKNH TSFL 84

(2) INFORMATION ON SEQ ID NO. 310:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 128 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 310:

```
CDRVPLFLSY WCAVADSWLT ASSVSHVKGI LSPQPTCAP PGPANCFNF FFFFFFFLVET 60
GPSVAQDGL ELLGSSNPPT LASQSAEITG MSHYAQPEQD DLNLINSTPK QQLSLSQGCQ120
GGLCEGKD                                     128
```

(2) INFORMATION ON SEQ ID NO. 311:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 311:

```
WVAGRRHLLS VQTKSLQVLG LDLCVTPESQ CIRYLYKKLV WFLSAKGKTC FLNLLSDNKV60
TPWKRRITSEK YGVTTWAFPV LAACFGKLQC RLQRAV                                     96
```

(2) INFORMATION ON SEQ ID NO. 312:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 57 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 312:

ISTSIAALWL PGGQDAGGGA LWPLCGSRGL CVSDREFGNF RARLTSWKFK YSIALEF 57

(2) INFORMATION ON SEQ ID NO. 313:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 52 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 313:

SAHQHQHCGY QGVRMRAVEP SGLCVVAEDS VSATVFRETS GRDSHLGNSN TQ 52

(2) INFORMATION ON SEQ ID NO. 314:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 43 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 314:

NSRAIEYLNQ QDVSLARKFP GKRSLTQSPR LPHKGQRAPP PAS 43

(2) INFORMATION ON SEQ ID NO. 315:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 247 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 315:

GSSGSRFEVV VVLEERRGGR GRGMGRGDGF DSRGKREFDR HSGSDRSGLK HEDKRGGSGS 60
 HNWGTVKDEL TESPKEYQKQ ISYNSYDLQ SNVTEETPEG EEHHPVADTE NKENEVEEVK120
 EEGPKEMTLD EWKAIQNKDR AKVEFNIRKP NEGADGQWKK GFVLHKSSE EAHAEDSVMD180
 HHFRKPANDI TSQLEINFGD LGRPGRGGRG GRGGRGRGGR PNRGSRTDKS SASAPDVDDP240
 EAFPALA 247

(2) INFORMATION ON SEQ ID NO. 316:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 316:

FMKNKSLPL PISTFIWFS IKFYFCPVLI LNSLPLIQSH LEWTLLFYLF NFILLIFSVC60
 HWMMEFTFRC FLSHI 75

(2) INFORMATION ON SEQ ID NO. 317:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 78 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 317:

SFGILKHAKA LNRRVHKGTR VVLWHPVKPE LGMPLGHPHQ EQKHLTCRSC CHGLGAHHAH60
VHLVLPCTRHV LGGQGLQN 78

(2) INFORMATION ON SEQ ID NO. 318:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 235 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 318:

LHLGAQRALA PGLFRLQGML RALLGRQLFR ARGPPVVREP LPRTTRLAVR HVWPPCDRPL 60
RVGPGSPLPP GPLHMHLLPA PAHQGVLPGA RRQALLPALL PEALRLTARS ARPLPRRPRP120
PGKAGSSRPR GLALRAGGPT HWRAPPLRYE ESSGVKFRNG PARPKPTRPQ SGLHTDKNSR180
AGLHSIPTLE GAPLLGEGPC NSSSEARPG RPCSLPHPCS VHFFYLHKHT HSTSK 235

(2) INFORMATION ON SEQ ID NO. 319:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 478 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 319:

GSRPPPCSPR ATGPRPAMED LDALLSDLET TTSHMPRSGA PKERPAEPLT PPPSYGHQPQ 60
 TGSGESSGAS GDKDHLSTV CKPRSPKPAA PAAPPFSSSS GVLGTGLCEL DRLLQELNAT120
 QFNITDEIMS QFPSSKVASG EQKEDQSEDK KRPSLPSSPS PGLPKASATS ATLELDRLMA180
 SLSDFRVQNH LPASGPTQPP VVSSTNEGSP SPPEPTGKGS LDTMLGLLQS DLSRRGVPTQ240
 AKGLCGSCNK PIAGQVVTAL GRAWHPEHFV CGGCSTALGG SSFFEKDGAP FCPECYFERF300
 SPRCGFCNQF IRHKMVTALG THWHPEHFCC VSCGEPFGDE GFHEREGRPY CRRDFLQLFA360
 PRCQGCQGP I LDNYISALSA LWHPDCFVCR ECFAPFSGGS FFEHEGRPLC ENHFHARRGS420
 LCATCGLPVT GRCVSALGRR FHPDHFTCTF CLRPLTKGSF QERAGKPYCQ PCFLKLFG 478

(2) INFORMATION ON SEQ ID NO. 320:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 285 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 320:

EQGLGVWRTR LFREGAASGG EGEPSGLSAE ELQEAGLAVG LAGALLEGPL GERAQAEGAC 60
 EVVRVEAATQ GRHAAAGHRE ATRGAQRAAS CVEVVLAQRA ALVLEKAASR EGREAFPADE120
 TVRVPERAER RDVVIQDQAL AALARGEQL QEVPAAVGAA LALVETLISE GLPATDAAEM180
 LWVPVSAQGG HHLVSDGLVA EATSWREALK VALGAEGGSI LLEEAAASQG GGTASANEVL240
 GVPGAAQSRH HLPNRFIAG ATEAFGLGNN TPAAEVGLQQ PQHGV 285

(2) INFORMATION ON SEQ ID NO. 321:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 99 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 321:

GLHLQPLLWR QSTEEEVREE GQALTEPKSC GAQGAQHRG LTPCPTGNGL GLAQPKIPAL60
 SNSWRVDSVL ACLVSSDIFH TVEQNHQPCT DVTLCRKR 99

(2) INFORMATION ON SEQ ID NO. 322:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 99 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 322:

ETQSSQRLTC PRSLGLDLSL RLRLQNPHSI CYISQGWGQG SCEQKEKYQL LKGLGFVGRA60
 RQGQRGIQNK GASTSAWDGP IHSGRGCGVS PVLNRHLAS 99

(2) INFORMATION ON SEQ ID NO. 323:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 83 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 323:

SNPKAPVSMW VKGPTMGTYT QEDESSLASE SDCLPQTPPQ NRLLSHLPLH SDKTQAHIPG60
 PGVFACICID GNAGPAKAFF YIK 83

(2) INFORMATION ON SEQ ID NO. 324:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 111 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 324:

VFPTVLRGVL VPSSVTSKPG LIVPIGDEGG MRRSHLQLLS VERTSGTEKN RGPHGSLEGR 60
GTRVGELIAE RRDVQRPSAP LSWDVNRIFP STPSLPPVLP LFFFPSIKRC I 111

(2) INFORMATION ON SEQ ID NO. 325:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 272 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 325:

SSRASGITRA ARPCPAKNEG PSKAFVNCDE NSRLVSLTLN LVTRADEGWY WCGVKQGHFY 60
GETAAVYVAV EERKAAGSRD VSLAKADAAP DEKVLDSGFR EIENKAIQDP RLFAEEKAVA120
DTRDQADGSR ASVDSGSSEE QGGSSRALVS TLVPLGLVLA VGAVAVGVAR ARHRKNVDRV180
SIRSYRTDIS MSDFENSREF GANDNMGASS ITQETSLGGK EEFVATTEST TETKEPKKAK240
RSSKEEAEMA YKDFLLQSST VAAEAQDGPQ EA 272

(2) INFORMATION ON SEQ ID NO. 326:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 241 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 326:

TLVEGLRLTK PFRIPGFLQR KRRWQIQEIK PMGAEHLWIP AALRNKVEAP ERWSPFWCPW 60
 AWCWQWEPWL WGWPEPGTGR TSTEFQSEAT GQTLACQTSR TPGNLEPMTT WEPLRSILRRH120
 PSEEEKSLLP PLRAPQRPNK PRRQKGHPRR KPRWPTKTSC SSPAPWPPRP RTAPRKPRRC180
 RRLLPAPMTI TFRIMSILGP SAPGDPTPCS NTCLGFSYCP QRRAGPLSD IKAWPNCSYW240
 G 241

(2) INFORMATION ON SEQ ID NO. 327:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 121 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 327:

AVVRVTWYKG EGITLPPVLT PALVRGESIP IRLFLAGYEL TPTMRDINKK FSVRYYNLV 60
 LIDEEERRYF KQEEVVLWRK GDIVRKSMH QAASQRFE GTTSLGEVRT PSQSDNNCR120
 Q 121

(2) INFORMATION ON SEQ ID NO. 328:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 140 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 328:

GETRVHSQQG GGIKAPSWDW FFREPGPLVK GLLGHVKQYL EQPRPWGYQV ERREGRRLLPC 60
 THLPWWAGFS LLGSTLPSPV HDTDFRASPC PRPSYRLLEQ DITDNPERME KGGAWVPAVS120
 GQKEVACGNL RSPHPRFPKR 140

(2) INFORMATION ON SEQ ID NO. 329:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 127 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 329:

VFPCHLVGAG PTPATTSGTA KGSTRCDYPG PCWQLRIPGT CSDEVSGSSE SQEPRMRALC 60
 SPSSKTQGSF PRKGAHVPQR GWLPGCYLFY PTSAAESQGE TASHPKPLGF SREKNLSQKH120
 DLFSGCK 127

(2) INFORMATION ON SEQ ID NO. 330:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 418 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 330:

GSTSTKNTKI SQACGVIVEL IKSKKMAGGA VLLAGPPGTG KTALALAIQA ELGSKVPFCP 60
 MVGSEVSTE IKKTEVLMEF FRAIGLRIK ETKEVYEGER TELTPCETEN PMGGYGKTIS120
 HVIIGLKTAK GTKQLKLDPS IFESLQKERV EAGDVIYIEA NSGAVKRQGR CDTYATEFDL180
 EAEYVPLPK GDVHKKKEII QDVTLDLDV ANARPOGGQD ILSMMGQLMK PKKTEITDKL240
 RGEINKVVNK YIDQGIAELV PGVLFVDEVH MLDIECFYTL HRALESSIAP IVIFASNRGN300
 CVIRGTEDIT SPHGIPDLL DRVMIIRTML YTPQEMKQII KIRAQTEGIN ISEEALNHLG360
 EIGTKTTLRY SVQLLTPANL LAKINGKDSI EKEHVEEISE LFYDAKSSAK ILGLTRQG 418

(2) INFORMATION ON SEQ ID NO. 331:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 142 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 331:

VPQCGLGANL PQVVQCLLTD VDSFRLGTDF NDLFHLWSI QHGPDYHHSV QKVKRDAVRG 60
 CDVLSASDDT VASVGCKDDD GSDRRLQAV QVGEALNVQH VDLINKQHTR DQLSNALVDV120
 LVHHLINLPS KFCVDFCLLW LH 142

(2) INFORMATION ON SEQ ID NO. 332:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 124 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 332:

LAHHGQDILS PLGPRISHIQ VMQGHILDDF FLFVHIPFWQ GDILFSFKVE FCGIGITPAL 60
 PLHGPTVGFN VNHISFYSL FLQTFKNAGV QFQLFGSFGC FESYDHMANG FAISSHGILC120
 LTRS 124

(2) INFORMATION ON SEQ ID NO. 333:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 176 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 333:

QAMGKKQKNK SEDSTKDDID LDALAAIEG AGAAKEQEPQ KSKGKKKKEK KKQDFDEDDI 60
 LKELEELSLE AQGIKADRET VAVKPTENNE EEFTSKDKKK KGQKGKKQSF DDNDSEELED120
 KDSKSKKTAK PKVEMYSGSL TNFLKKLKGK LKNQIRSGMG QRRMRITVKK LKSVQE 176

(2) INFORMATION ON SEQ ID NO. 334:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 193 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 334:

RFKIKKDCKT ESGNVLWEFN KLPKKAKGKA QKSNKKWDGS EEDEDNSKKI KERSRINSSG 60
 ESGDESDEFL QSRKGQKKNQ KNKPGPNIES GNEDDDASFK IKTVAQKKA EKKERERKKRD120
 EEKAKLRKLK EKEELETGKK DQSKQKESQR KFEETVKS KVTVDTGVIP ASEEKAETPTA180
 AEDDNEGDKK NER 193

(2) INFORMATION ON SEQ ID NO. 335:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 118 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 335:

ETVAFARPPF PSLESFPPLS SFLFLIFRS FCLLHCHLLQ LWESLLSLQR QELLQYQQSL 60
 WILQFLLQIS FEIPFVYSDP FYLFLTLLFL SASAVSLFLH LAFFSRAPSF LPSFGPLS 118

(2) INFORMATION ON SEQ ID NO. 336:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 230 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 336:

LQRLLPFGAE RPAHLCTGPG GEDGAGGRVP GTRPQRPPAL QRAEDGRQGG LRVAGTAGPP 60
 PGVPLRPGQG GSGHQEQGAS HPGSLDQGLT GAKRPQGCFA CGRRPPCVGG VPGSAHRPQP120
 EGAALRRGRS RLQQAGPCCC RVLWLRRCHP AGLPRRPPAA DPGARAAAGG RHLVCRSPLH180
 PGLRPPLPQW GLLRPEGGCL CVPVSRGILR TALREGAGGE VSGGRGYLGL 230

(2) INFORMATION ON SEQ ID NO. 337:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 416 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 337:

QDGGSPFLAD FNGFSHLELR GLHTFARDLG EKMALEVFL ARGPSGLLLY NGQKTDGKGD 60
FVSLALRRDR LFRYDLGKG AAVIRSREPV TLGAWTRVSL ERNGRKALR VGDGPRVLGE120
SPVPHTVLNL KEPLYVGGAP DFSKLARAAA VSSGFDGAIQ LVSLGGRQLL TPEHVLQVD180
VTSFAGHPCT RASGHPCLNG ASCVPREAAAY VCLCPGGFSG PHCEKGLVEK SAGDVDTLAF240
DGRTFVEYLN AVTESEKALQ SNHFELSLRT EATQGLVLWS GKATERADYV ALAIVDGHQ300
LSYNLGSQPV VLRSTVPVNT NRWLRVVAHR EQREGSLQVG NEAPVTGSSP LGATQLDQ360
ALWLGGLPEL PVGPALPKAY GTGFVGCRLD VVVGRRHPLHL LEDAVTKPEL RPCPT 416

(2) INFORMATION ON SEQ ID NO. 338:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 241 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 338:

NQHMKNNTAMA RPRYPGRRQR STPSHSELLS IAPRRWGVV EGYGHVQGGW AGPAEQDQ 60
IGPGLASAPQ QPGLAQARE QRRVPSNI VWKSQYWRRR PRQGPEHTQE GAAQIGAWKG120
PVGSPGGRAP SDLSSPFLSG TRVPPD GARV IQEPGLLP GG DTVGQAQCKA GAQHLEAGVC180
VLRLPSTPSP PRCHLACPSL STRSVCSTAA WTEGRPGQQS LRPTLRQENH IKKRQVYKNR240
K 241

(2) INFORMATION ON SEQ ID NO. 339:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 339:

LLQPQGEMPP GNPPMSTRGQ EATVLRTPEN LAGELFLVHP SLQLYLCPAD NVKDWSKVVL60
AYEPVWAIGT GKTATPQQG 79

(2) INFORMATION ON SEQ ID NO. 340:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 62 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 340:

FPVGVLSQSQ YQWPTQAHRP GRPCSSPSRY LQGRDTAGGK GEQERALQPG SPEYEERWPP60
AP 62

(2) INFORMATION ON SEQ ID NO. 341:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 80 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 341:

SLLGCCSLAS TNGPHRLIGQ DDLAPVLHVI CRAEIQLEGR VNKKELSSQV LRSTKNGGLL60
PPSGHWGISR WHLPLGLEKS 80

(2) INFORMATION ON SEQ ID NO. 345:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 257 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 345:

```
KNLSQLEPRE NAKEEVRKER GMGWVAAGAA QLLSLLSTST ASDSSVISSS ACTSGLLPRR 60
RSPASPRSAH LHLGGLLEHF HLALADLLDV EGEGLVLDV GLGARVHHVV GREGFAQLVP120
RRLQFLAPLG GHQARAQLVH ALLQGVPRLL QVFLGLEARL LQVLAGTHLG LLHLLGEG180
LEVVAHQAL RLIRSARDSS ITSSTSTASS DESSSAAASS SGRSPSPSS PSFSGSASDS240
FSDLLMLSLA GSFTSSW                                     257
```

(2) INFORMATION ON SEQ ID NO. 346:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 237 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 346:

```
KSRRCQRRR ARSWARASGP RRTQRRWSFR RTRRWRLRRL LRSPAQSVSS AGPAARGRLQ 60
EGLQGEDGE DQAYPREPG EDAPQDQGP GEDAAHPGEA HEQAGHAPGA RRAARETEDV120
AGQVAQILHA RPRGVRLQD RGLQGATLHL PRQEDPRGPG GSAQGHDRGG GGRSGGRPAT180
CGAGAAPTCT RCWRSRPSRT PCWWTRATAT ERPPLPPTPF LAPSELPLSH SLSARAG 237
```

(2) INFORMATION ON SEQ ID NO. 347:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 263 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 347:

```
GRLPGYPDRR GPGASSAGAQ AAEEPSGAGS EELIKSDQVN GVLVLSLLDK IIGAVDQIQL 60
TQAQLEERQA EMEGAVQSIQ GELSKLGKAH ATTSNTVSKL LEKVRKVSVN VKTVRGSRLR120
QAGQIKKLEV NEAELLRRRN FKVMYQDEV KLPKLSISK SLKESEALPE KEGEELGEGE180
RPEEDAAALE LSSDEAVEVE EVIEESRAER IKRRACGAWT TSRRPSPRRR WRRPRCVPAR240
TWRRRASRPR KTWRRRGTPW RSA                                     263
```

(2) INFORMATION ON SEQ ID NO. 348:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 106 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 348:

```
SSGSSRFGSS GSRRRYASLY FCCAIEDQDN ELITLEIIHR YVELLDKYFG SVCELDIIFN 60
FEKAYFILDE FLLGGEVQET SKKNVLKAIE QADLLQEEAE TPRS GS                                     106
```

(2) INFORMATION ON SEQ ID NO. 349:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 78 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 349:

LFLMPQNKVR MVIQEFFIT VSYKKRVALF TVLCVKSLFK ARMFPLGYLL KLNLFCEPPL60
 RSAAHFTAAS FLSMALPS 78

(2) INFORMATION ON SEQ ID NO. 350:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 65 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 350:

TCLHGLYFHL YMLGWIKLCC DCDQHS GHVS TVLSHRQLVV INVQRTKKKK GAASLGGITG60
 SGVKR 65

(2) INFORMATION ON SEQ ID NO. 351:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 196 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 351:

LPGLPLRQLG GVCHGHRPGL LLHQQHGGGA GAVQQPQREE EALHDPGQGS APAELCQFQQ 60
 HVPRFPLQQP QAVQEGGGAG AGQGLVLWQP GAGLQGVQPG DDGAPDLQHG DAAGDSHHDD120
 PAQELPAAEH RAQGPGGPRP ALRGGARSNC RVCLVQMCPE APEGSHQLMP ASDPQQGWFA180
 AAAQGEPSVD PGHHHH 196

(2) INFORMATION ON SEQ ID NO. 352:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 361 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 352:

SLASLSDSLG VSVMATDQDS YSTSSTEEEL EQFSSPSVKK KPSMILGKAR HRLSFASFSS 60
 MFHAFLSNNR KLYKKVVELA QDKGSYFGSL VQDYKVYSLE MMARQTSSTE MLQEIRTMMT120
 QLKSYLLQST ELKALVDPAL HSEEELEAIV ESALYKCVLK PLKEAINSCL HQIHSKDGSL180
 QQLKENQLVI LATTTTDLGV TTSVPEVPM EKILQKFTSM HKAYSPEKKI SILLKTCKLI240
 YDSMALGNPG KPYGADDFLP VLMYVLARSN LTEMLLNVEY MMELMDPALQ LGEGSYLLTT300
 TYGALEHIKS YDKITVTRQL SVEVQDSIHR WERRRTLNKA RASRSSVQPL HLRVVPGARA360
 A 361

(2) INFORMATION ON SEQ ID NO. 353:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 161 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 353:

VDFGLQGLQD TFVQGRLYNC FELLGLGVQGG VHQGLELGAL QQVALELGHH GANLLQHLRA 60
 GGLARHHLQA VHLVVLHQAA KVRALVLRQL HHLLVQLAVV GEESVEHAAE TGKAQPVPSL120
 AQDHGGLLLH AGAAELLQLL LRAAGVGVL VGGHDRHPQA V 161

(2) INFORMATION ON SEQ ID NO. 354:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 218 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 354:

```
SGRGPKYVID VEQPFSC TSL DAVVNYFVSH TKKALVPFLL DEDYEKVLGY VEADKENG 60
VWVAPSAPGP GPAPCTGGPK PLSPASSQDK LPPLPPLPNQ EENYVTPIGD GPAVDYENQD120
VASSSWPVIL KPKKLPKPPA KLPKPPVGPB PEPKVFNGGL GREAAASSVSA QPLLSPQAGL180
GRHGRQSYRR SWEKRRGTGS MVSDTPGTSG LVPGRARW 218
```

(2) INFORMATION ON SEQ ID NO. 355:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 253 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 355:

```
AGEGVDGLTQ ETPLKPVSQ L PGPAGAPTGR RGQAEDPGSV MASALRPPRV PKPKGVLPSH 60
YYESFLEKKG PCDRDYKKFW AGLQGLTIYF YNSNRDFQHV EKLNLGAF EK LTDEIPWGSS120
RDPGTHFSLI LRNQEIKFKV ETLECREMWK GFILTVVELR VPTDLTLLPG HLYMMSEVLA180
KEEARRALET PSCFLKVSRL EAQLLLERYP ECGNLLLRPS GDGADGVGHH ADAQRDARG240
PALQGEAGGA PST 253
```

(2) INFORMATION ON SEQ ID NO. 356:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 118 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 356:

LTTASREVQE NGCSTSITYL GPLPLHLVMP DHVRPVVHLP RGDRHRRRRP RWAAAAGSRT 60
RGSAPGAVVP PAGSPSGSTR VSPVHGAPPL WPRLQTSCIG AQEAGSSRSR HGAPPPLR 118

(2) INFORMATION ON SEQ ID NO. 357:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 223 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 357:

DHTCGCAGNL QEAIMLRSGV TSQGIHPGSP WCCTPTQ AEL IVGDQSGAIH IWLKTDHNE 60
QLIPEPEVSI TSAHIDPDAS YMAAVNSTGN CYVWNLTGGI GDEVTQLIPK TKIPAHTRYA120
LQCRFSPDST LLATCSADQT CKIWRTSNFS LMTELSIKSG NPGESSRGWM WGCAFSGDSQ180
YIVTASSDNL ARLWCVETGE IKREYGGHQK AVVCLAFNDS VLG 223

(2) INFORMATION ON SEQ ID NO. 358:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 193 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 358:

```

FFFFFFFFFP EQHLRVGLLL LPPRLSPRPG PAWPVPNPVG WPGHLHQGGQ LLAGTNKPFH 60
LAMVVVFSMD RGPETRAGRG REHTSLGVGT SLRPLSSFPG SADFPQCRL AQSRSVQPGL120
GRALSHLDKQ LGAESPRAAW PSRSRAHRGP SGPVAQAGRG GSALTWVLHG SLQLPPFPAPG180
SPEGSQASPA HCH

```

193

(2) INFORMATION ON SEQ ID NO. 359:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 251 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 359:

```

PGCCMGPPSSC HHLHQAVPRG HRLAQHTVIE GQADNSLLVA AILSLDLSSL HTPGPGQVVR 60
GSSDDVLGVP REGAAPHFAA GGLPGVAALD AQLRHQGEVG RPPDLARLIS RAGGEERG120
AEATLQGVAR VGRDLSLGDE LGHLVTNAPR QIPDIAVSGA IDSCHVAGVG IDVGGRDGD180
GLRDQLLVVV CFQVPDQVDSF ALVTHDELCL GWGAAPGTTPR VNALGGHTGP QHDCFLQVTS240
TSACMILTSS C

```

251

(2) INFORMATION ON SEQ ID NO. 360:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 360:
GNIPHSNLTD ASSPKRIKIV ACTDQENILG RMKYVCLFFF KNKGFWNSGE

50

(2) INFORMATION ON SEQ ID NO. 361:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 59 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 361:

KGNQLYQGET RALGTMTRT AFILHSDCF QSSNDCQATS QMTDNFCCSF LYKMLRQQA 59

(2) INFORMATION ON SEQ ID NO. 362:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 67 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 362:

DKILLSPRME CSGMIMAHCS LDLPGSHLSL PSSWDHRHVP PCPANFYFGR DKVSPCCLGR60
FQTPGLK 67

(2) INFORMATION ON SEQ ID NO. 363:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 84 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 363:

MRRCIHPSHS LSGSRQTQSP LSHSASNGST TKVAQQMRRRA AAVVGESTEE TRLGRALGAA60
GFTNKQLSEN TAQGEKRVN CLQN 84

(2) INFORMATION ON SEQ ID NO. 364:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 127 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 364:

CAYRTEKWKS HTVPCSPEVK LVLTLALRAF SSMEPLGLGR KARVSAHRHT SYLQDIDCLC 60
RGSTGQPTAN TAASLVASL LPVHPGDYSW INLPKNSAFI MSLFCSKTQN GSLPPRGRPS120
HHCIPNR 127

(2) INFORMATION ON SEQ ID NO. 365:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 114 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 365:

PYVHSPAWSP WGLVGRLVSV HTDIPATFRT LIVSAEVALG SQLQTQQPPW FQLLSFQYIL 60
ETTPGLIFLR TQHSLCHFSV RKPQMAPCHL EADQVITVSP TASTVCIWYI VQAP 114

(2) INFORMATION ON SEQ ID NO. 366:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 30 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 366:

NLHSNIKVFF YNVPKISGPQ QAVFVPVFFN

30

(2) INFORMATION ON SEQ ID NO. 367:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 44 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 367:

KECMSEAQFL ATTLTKGNNC RGILQLIHTQ HLLHTVFTDS NLVG

44

(2) INFORMATION ON SEQ ID NO. 368:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 34 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 368:

NVDFRCKNML EIRFSAIKPN TKKIKKNVCQ KPNS

34

(2) INFORMATION ON SEQ ID NO. 369:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 147 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 369:

QPSSLLHHCP YPYPPRHLLA TPLLKPQLLA GSPAHLIS FLASPQRASR QHGGPSQRAG 60
 TLSCPLVELG GSSGGRGLCH GSADPTNRAA EPQERGEPA GDRRPLPEWG RVSLAESPGA120
 EFRCPGSLGE WGEIPEKESS AHPKTEE 147

(2) INFORMATION ON SEQ ID NO. 370:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 244 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 370:

NHSCWQGPQL MPASSPFLLA PKGPPGNMGG PVREPALSA LWLSWGAALG AVACAMALLT 60
 QQTELQSLRR EVSRLQGTGG PSQNGEGYPW QSLPEQSSDA LEAWESGERS RKRRAVLTQK120
 QKNDSDVTEV MWQPALRRGR GLQAQGYGVR IQDAGVYLLY SQVLFQDVTF TMGQVVSREG180
 QGRQETLFRG IRSMPSHPDR AYNCSYSAGV FHLHQGDILS VIIPRARA KL NLSPHGTFLG240
 FVKL 244

(2) INFORMATION ON SEQ ID NO. 371:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 185 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 371:

TPASWIRTPY PWACRPLPRL RAGCHITSVT SESFFCFWVS TALLFRDLSP LSQASRASEL 60
 CSGRLCQGYF SPFWEGPPVP CSRLTSLRL CSSVCWVSRA MAQATAPRAA POLNQRATES120
 AGSLTGPPML PGGPLGASKK GDEAGMSWGP CQQLWFQEWG SKEVAGRVRV RAVVQKGRRL180
 LRKEK 185

(2) INFORMATION ON SEQ ID NO. 372:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 148 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 372:

VLYHCASRYR RRARQTCAPS YTRSADLPSR TPPVEDLLEL SRAFWVGADG GGRVRVLGGT 60
 EAHEDGIPPE SMDHYADGHR PQHCHLGYRC HGRPQREGLP RCLKVPPVNL SSVSVFPVPT120
 HRAGMEFNGC SGQTLVHGQT SLLWILQD 148

(2) INFORMATION ON SEQ ID NO. 373:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 135 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 373:

CLPVRRLRQF EPKTPKVEAE FQSMGSRLSQ PFESYITAPP GTAAAPAKPA PPATPGAPTS 60
 PAEHRLLKTC WSCRVLSSGLG LMGAGGYVYW VARKPMKMGY PPSPWTITQM VIGLSIATWG120
 IVVMADPKGK AYRVV 135

(2) INFORMATION ON SEQ ID NO. 374:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 152 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 374:

IPCLLCVSRG KGQRQKTDLS VVLSNNAVGL PFGVCHDNDT PGGNAEADDH LRNGPWTRGV 60
 SHLHGLPCHP VHVPARPHQP QPRKHATAPA GLQQAVFCWG GRRSGCSWGR RFGGRGGGTG120
 RRSDIGLKRL GQPRPHALEL GLNLGRLWFK LA 152

(2) INFORMATION ON SEQ ID NO. 375:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 107 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 375:

GAEQLRSCA MAVSQEGLDG EVKAPDARIF IPCANTAFTP DLQVLQQVLS SFTVSSPLFH 60
 SGFICYTPNL FSQSTPQSLP CWGQHRKRQN LRKEKGNLQP AMDLMIP 107

(2) INFORMATION ON SEQ ID NO. 376:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 376:

IPKNFYHNIH RSLYQLYLEV KQAWESIDCS ACPRVEALNK ATKTPETDL TFQWPTGPGS 60
 GQVGHQANHL FPCASLCKSW SVELARPSLV QDLGPQTKES RGLGFPDPRM VSL 113

(2) INFORMATION ON SEQ ID NO. 377:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 124 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 377:

FGGPQAQPHS AVGSSLSSQI QVNLSFKNKG EPQTCSTTRD NNTPWQEDHV LDCLRTATVR 60
 QEACCDPLCS MPFAQASSIP YHLPPMLFFG TTTLAKREYG KQRPRALLQY RHFEVGRQHM120
 LHSK 124

(2) INFORMATION ON SEQ ID NO. 378:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 66 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 378:

HKIILISRYR RNSVVTQAI LYTPMILQRK HPSLLLPLW QKICISSTL KRRKRNNLSL60
 IPKLPH 66

(2) INFORMATION ON SEQ ID NO. 379:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 67 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 379:

PEKSPGAGPL LGGSPFFFFFF YVSKSTEEIL KHSIKFESHE TKASLHYMLI LAKSKDQHTI60
 DIHDNVV 67

(2) INFORMATION ON SEQ ID NO. 380:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 380:

FCIHFECLHV KTQLIYYFNI KPISFEAKLI LLFYKSNQDS FFRMLKAQCL RFMLAALLAL60
 LLPKMTKQN R 71

(2) INFORMATION ON SEQ ID NO. 381:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 107 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 381:

MDGAQGRLLP VSSRHSNLAL LKPTSRDLTA PPEGASLMTV GGITAPRDVQ VWNPRTWESV 60
 TLRGKRDPAP VLQFRISWWG DDRGWLRWAL SNHGGPYKGR GVTRVCA 107

(2) INFORMATION ON SEQ ID NO. 382:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 143 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 382:

EVENHTNLLS YSSRGQESKM VFTRLKSCQC GFVSPRRLWG RIQCLFQLLQ GPPHRLAPGL 60
LAIFTARSFL ASCADPRDSP SLIRAPMITQ GPPQPSTVIS PPRNPCLKHR RRVPFATQGN120
TFPRPGVPLN DISGGCYSTH RHQ 143

(2) INFORMATION ON SEQ ID NO. 383:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 86 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 383:

SHTHAQLSNH GGVQEPPLPL GVPKPWGS DS GALS R PGCKL KTPGGFQNAQ CLGHNLDQLN60
LNLQDITAP QETPRGSQSA KPEETI 86

(2) INFORMATION ON SEQ ID NO. 384:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 123 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 384:

LEPIRFQQKV MEKETEKRI S EIEDAAFLAR EKAKQDAEYY AAHKYATSNK HKLTPEYLEL 60
KKYQAIASNS KIYFGSNIPN MFVDSSCALK YSDIRTGRES SLPSKEALEP SGENVIQNKE120
STG 123

(2) INFORMATION ON SEQ ID NO. 385:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 83 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 385:

DNSCVRYVEA QOKSHGTTSR NLSAVRPVSL MTVCWLCQTL YLGKESPDNL GSFPWALSYP60
GICNMEKIIF HFCSFNSINS LYK 83

(2) INFORMATION ON SEQ ID NO. 386:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 88 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 386:

CLTFQCRQYL SIRLSSFMSS SLERNYRIL DKTVAEKTIC VSDSWLYPPI SGAPRTIAGE60
VEQMKCKFSV NLKSPYNDCS HLTPWATS 88

(2) INFORMATION ON SEQ ID NO. 387:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 105 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 387:

TCEPFRNPQV GKDPTPSLRI ICLAITGSWK CFLGCVKINQ GGMKHIFLAT KLEFLREQMQ 60
RDLILLARLQ GPLWSHTEAV TGHKPRRARG SCAEAPGPLS GSFPS 105

(2) INFORMATION ON SEQ ID NO. 388:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 173 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 388:

AQESPWQLCR GARTSKRKLP KLGMEQHCNE MCPSSLFLP GAYKAQMYSD VWTNTKKKKK 60
KKKKKAFLSH RHKTQIIYCY EALFTNGQFL HFIAACERLP DGRPISLVLQ TSSQAAFYQK120
GENSCLSLFK NAFLYLSIRH YTSELYKRP G TMSLVDTFH CSVAPFLAWE ASA 173

(2) INFORMATION ON SEQ ID NO. 389:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 105 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 389:

TCEPFRNPQV GKDPTPSLRI ICLAITGSWK CFLGCVKINQ GGMKHIFLAT KLEFLREQMQ 60
RDLILLARLQ GPLWSHTEAV TGHKPRRARG SCAEAPGPLS GSFPS 105

(2) INFORMATION ON SEQ ID NO. 390:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 262 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 390:

```
RCPRRGREMD SGCWLFGGEF EDSVFEERPE RRS GPPASYC AKLCEPQW FY EETESSDDVE 60
VLT LKKFKGD LAYRRQ EYQK ALQEYSSISE KLSSTNFAMK RDVQEGQARC LAHLGRHMEA120
LEIAANLENK ATNTDHLTTV LYLQLAICSS LQNLEKTIFC LQKLISLHPF NPWNWGKLA E180
AYLNLGPALS AALASSQKQH SFTSSDKTIK SFFPHSGKDC LLCFPETLPE SSLIFCGRDT240
RNGRKIGKFC KCANLVGERG TG                                     262
```

(2) INFORMATION ON SEQ ID NO. 391:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 66 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 391:

```
KPVPLSPTRL AHLQNFPIFL PFLVSLPQKI KELSGKVSGK HKRQSFPECG KKD LIVLSLE60
VKLCCF                                     66
```

(2) INFORMATION ON SEQ ID NO. 392:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 78 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 392:

QAGGRVPWLN GLCWLLYFPS LQOSPAPPYA YPGEPDTEPD LPGHPFSWQN WLMTIFQRYW60
NTPAVLSOTL VVCRPGLL 78

(2) INFORMATION ON SEQ ID NO. 393:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 393:

TSLEGIDLQP SHLTIYTAAL KEKTPDFRRL SPRVSETADS RKVARGPRFV MRDNPGRGGD60
HRGLQAPGWM KEGRGWGVL 79

(2) INFORMATION ON SEQ ID NO. 394:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 72 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 394:

VTPPPPSQIS SFLPPSTAPF TKPPIPOPPS STPAPGDPYD HPRARGCPAL QIGAHGRPYG60
SPRSPRREER DV 72

(2) INFORMATION ON SEQ ID NO. 395:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 395:

PPPPPPKFHP SFRLLQPPLQ NPPSPTLLHP PRRLETPMIT PAPGVVPHYK SGPTGDLTG60
 RGLRDARRET SEVWRLFLQG CCVDCEVGGL KINSLEGG 98

(2) INFORMATION ON SEQ ID NO. 396:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 396:

NWRQTVWQRV REGACQESS RPASGCRFLR CAIGASAFSG DRGSAVATNT QPHTNHHTHK60
 WGQPHPVQAF TNVISVLFYF 80

(2) INFORMATION ON SEQ ID NO. 397:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 309 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 397:

YDNSSTCKKG KVFPKGISVT VSETFDPEEK HSMAYQDLHS EITSLFKDVF GTSVYGQTVI 60
LTVSTSLSPR SEMRADDKFEV NVTIVTILAE TTSDNEKTVT EKINKAIRSS SSNFLNYDLT120
LRCDYYGCNQ TADDCLNGLA CDCKSDLQRP NPQSPFCVAS SLKCPDACNA QHKQCLIKKS180
GGAPECACVP GYQEDANGNC QKCAFGYSG L DCKDKFQLIL TIVGTIAGIV ILSMIIALIV240
TARSNNKTKH IEEENLIDED FQNLKLRSTG FTNLGAEGSV FPKVRITASR DSQM QNPYSR300
HSSMPRPDY 309

(2) INFORMATION ON SEQ ID NO. 398:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 105 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 398:

QALIASTTFN VIDSYLASEL DSLQTFTTSI QRGWQMSDGR KTPERSLLV LTSPSVFLNT 60
LNNSLYIGWG PWRVPHSYDS NSQGGACCCV LNRDFASGCL WRPLS 105

(2) INFORMATION ON SEQ ID NO. 399:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 75 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 399:

CFSCFVICSV SLCTLNIYPL CDK K K K K K K K K SRTSTFDFSQ PQPRKNGSWD KQLVFVSKTQ60
IGHINATAFR SDFDF 75

(2) INFORMATION ON SEQ ID NO. 400:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 70 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 400:

RKKAVCFMND LICFLDNTEK NNVLSQAWWC VHLVPTIWEA EAGGSLEPRS LKLQCPVVAP60
 VNNCTPAWAT 70

(2) INFORMATION ON SEQ ID NO. 401:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 69 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 401:

LVPQGSLLQT HPFVFFSFLE MRSRYVAQAG VQLFTGATTG HCSFKLLGSS DPPASASQIV60
 GTRCTHHHA 69

(2) INFORMATION ON SEQ ID NO. 402:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 402:

PPLWVATVRN GCCHVFWTLP ANRSLPGFGN TSITSLLLFC RDKTFEVARP RTSKDSCYSA60
TVYTAHLSYS HVLSSLVRLF 80

(2) INFORMATION ON SEQ ID NO. 403:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 81 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 403:

LTNMSDHLFG WLLLEMAVVM FSGLCQPTDP CQVLEILLP RCYFSAGIKL LRWPDPEHPR60
IPVTVLQYTL LIYPILMCFL L 81

(2) INFORMATION ON SEQ ID NO. 404:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 75 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 404:

VSHYPHSVSK PPKHQTKQMV VALTHSRLTS EFKWENTPYT TVIIPLWTLN ITYFLKIILL60
KKKAHENRIN EQCIL 75

(2) INFORMATION ON SEQ ID NO. 405:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 328 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 405:

```

RYLNMGNLLK VLTCTDLEQG PNFFLDFENA QPTESEKEIY NQVNVVLKDA EGILEDLSY 60
RGAGHEIREA IQHPADEKLQ EKAWGAVVPL VGKLKKFYEF SQRLEAALRG LLGALTSTPY120
SPTQHLEREQ ALAKQFAEIL HFTLRFDELK MTNPAIQNDF SYRRTLSRM RINNVPAEGE180
NEVNNELANR MSIFYAEATP MLKTLSDATT KFSSENKNLP IENTTDCLST MASVCRVMLE240
TPEYRSRFTN EETVSFCLRV MGVVIILYDH VHPVGAFKAT SKIDMKGCIK VLKDQPPNSV300
EGLLNALRYT TKHLNDETTT KQIKSMLQ                               328

```

(2) INFORMATION ON SEQ ID NO. 406:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 115 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 406:

```

YYIHLIINFL LRLCRLGIFK IKEKIWPLLK VCACQNFKKI PHVKVPSASA GDSVLVLLSS 60
ARASRRSQSR SCALLDRRGG SSAALGGAPG PERGSGGSRT GSPSTPAPVA EPPQA      115

```

(2) INFORMATION ON SEQ ID NO. 407:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 100 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 407:

QEPALALDAG WENMGYLLRL PEDLLMLLLT SEKIRKISLI CLLVEQLHPM PSLATSHLLD 60
AGLPLVFRGQ LLCMTASPPR CLLHLLILHS PDYKFPSQTL 100

(2) INFORMATION ON SEQ ID NO. 408:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 116 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 408:

TVLHSHLPSS CLPCLSTHSV KEPRGATSPR LCFPTACGMG VSSATAGLRC FHQPCRHLVL 60
HEEQTLRGWS GMGRSPLGGQ ALVPSRFP SL APGVHTAQSA PGGWKPPCFR SLGSPP 116

(2) INFORMATION ON SEQ ID NO. 409:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 132 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 409:

SPDERCSIRT SPPRACPASP RTVLR SQEEP LRPDFVSPPP AAWVCPVPPL ASAASISLVA 60
TWSEFMKSRHL EAGREWGGRP WEGRRWFQAG SRPWRLECTQ PSRHLVAGSH PALDHSGPHL120
RRVPALDQSR GH 132

(2) INFORMATION ON SEQ ID NO. 410:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 142 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 410:

```

WKQRRPAVAL DTPMPQAVGK QSLGEVAPLG SLTLCVERQG RHEEGRCEWS TVHPGISQPE 60
SPPSLAAPEH SLWPTATEMS ACQDTWRRKK TRHQKKLPPQ EQIELLDQGH TRSGRHPAPC120
AQGKETQFNV WLLCSRETAT LP                                     142
  
```

(2) INFORMATION ON SEQ ID NO. 411:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 244 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 411:

```

KRRGVRQFRW LVCTRRASPG AARSAPIAPA TGSGRRPNMD SAGQDINLNS PNKGLLSDSM 60
TDVPVDTGVA ARTPAVEGLT EAEEEEELRAE LTKVEEEIVT LRQVLAAKER HCGELKRRLG120
LSTLGELKQN LSRSWHDVQV SSAYVKTSEK LGEWNEKVTQ SDLYKKTQET LSQAGQKTS180
ALSTVGS AIS RKLGD MRNSA TFKSFEDRVG TIKSKVVGDR ENGSDNLPSS AGSGDKPLSD240
PAPF                                     244
  
```

(2) INFORMATION ON SEQ ID NO. 412:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 149 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 412:

LGHFLIPLSK FLRSFHIGAR DLHVMPAPGQ VLFQLPQGGE AQPPELSTV PLLGCQDLAQ 60
SDNLFHLGK LSPPELLLSL CQTLNSRSPG SHTCVDNRIR HGVRRQTFVR RIQVDILAGG120
VHVRAASGPC RGRYGSRAGG AGRSSPRTH 149

(2) INFORMATION ON SEQ ID NO. 413:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 143 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 413:

ALETCTSCQL LDRFCFSSPR VERPSLLLSS PQCLSLAART WRRVTISSST LVSSALSSSS 60
SASVRPSTAG VRAATPVSTG TSMESDSRP LLGEFRLISW PAESMFGRRP DPVAGAMGAE120
RAAPGEARRV HTSQRNCLTP RRF 143

(2) INFORMATION ON SEQ ID NO. 414:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 414:

RGRGALWWAA KELRRTKKLS DYVGKNEKTK IIAKIQQRGQ GAPAREPIIS SEEQQLMLY 60
YHRRQEELKR LEENDDDAYL NSPWADNTAL KRHFHGVKDI KWRPR 105

(2) INFORMATION ON SEQ ID NO. 415:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 386 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 415:

AAELRDCGSR RISRSPSSNS HLSPRISLSG NLGPQTSRLG GPPSPSATWS VFWQLPRQQS 60
LPGRGSANLL PSVRSESAVL SDCVGGFPGR SSVRAWIAGP RCTEASPTRV LSLSWRLFNS120
ASLLLLLATST SGSECRFPRS PRARERGIPD CERLLVRRSC WRSGDPRPAG PAGHAAGAFS180
TPQYLGGTAM VLLHVKRGDE SQFLLQAPGS TELEELTVQV ARVYNGRLKV QRLCSEMEEL240
AEHGIFLPPN MQGLTDDQIE ELKLDKEWGE KCVPSGGAVF KKDDIGRRNG QAPNEKMKQV300
LKKTIEEAKA IISKKQVEAG VCVTMEMVKD ALDQLRGAVM IVYPMGLPPY DPIRMEFENK360
EDLSGTQAGL NVIKEAEAHG GGQPRS 386

(2) INFORMATION ON SEQ ID NO. 416:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 182 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 416:

GVEKAPAAWP AGPAGRGSPD RQQLRRTNSR SQSGIPRSLA RGERGKRHSL PEVDVAKSNS 60
 EAELKSRQLK LRTRVGEAGV HRGPAIQART ELRPGKPPTQ SERTADSERT DGRRFADPLP120
 GSDCCRGNCQ NTDQVAEGEG GPPNRLVWGP RFPLREIRGL RWELLDGERE IRREPQSRSS180
 AA 182

(2) INFORMATION ON SEQ ID NO. 417:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 467 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 417:

HTLSRWTKHS IPRWNDARTD DTWHSELDNR KIGQARNTLM DMRLSQVSDS VSGQTVVDPK 60
 GYLTDLNSMI PTHGGDINDI KKAALLKSV RETNPHHPPA WIASARLEEV TGKLQVARNL120
 IMKGTEMCPEK SEDVWLEAAR LQPGDTAKAV VAQAVRHLPQ SVRIYIRAAE LETDIRAKKR180
 VLRKALEHVP NSVRLWKAAY ELEEPEDARI MLGRAVECCP TSVELWLALA RLETYENARK240
 VLNKARENIP TDRHIWITAA KLEEANGNTQ MVEKIIDRAI TSLRANGVEI NREQWIQDAE300
 ECDRAGSVAT CQAVMRAVIG IGIEEEDRKH TWMEDADSCV AHNALECARA IYAYALQVFP360
 SKKSVWLRAA YFEKNHGTRE SLEALLQRAV AHCPEAEVLW LMGAKSKWLA GDVPAARSIL420
 ALAFQANPNS EEIWLAAVKL ESENDEYERA RRLAKARTV PPPPGCS 467

(2) INFORMATION ON SEQ ID NO. 418:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 352 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 418:

TPGRWGHCPR LGQQPPGPLV LIILGLQLHG CQPDLLTVGV GLEGQGDAP CCRHIPQCPL 60
 GLGAHEPQHL CFGAVGHSPL QECFQGLPSA MVLLEVRGAQ PHTLLAGEHL QGVGVGDSCT120
 LQGIYGYTIV SILHPGMLPI FLLNPNPNHG THDGLAGGHT PSPVTFILGIL DPLLTVDLHT180
 VGPQRGDGSV DDLHHLRVP IGFLQLSSRD PDMSVCNRNL PRLVQDLAIG FIGLQPCQSK240
 PELHAGGAAL HSSAQHDSSI FRFFQLNGCF PQANRVWNML EGFFKNPLLC TNVRFQLCGS300
 DVNPORLWEM TDSLGYHGLG CVPRLQPGCF QPDIFTLGAH LRPLHDKVPS YL 352

(2) INFORMATION ON SEQ ID NO. 419:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 424 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 419:

```

PPGAPFFLFF FFLTRDIKTF NEGGHSSPEF HMRPNPAPRR PAMATAQSEG VLDAAGHQPK 60
DVPDLLLPVG DVLGHGAPQL PMPRLCTLT LPHLLLLLLS AMLQLKLVEE GPGIPQVRVN120
LHSAVEPLPG LGDLPLTPKQ LGHGQEHMGV MTLTLLQGIHA LGPPLGPCLE EDGLRPQDTG180
VGALLQRLGH ECICDVLQPR TVLQPHGLQP QPRVLWVLQT RLFQNGPCSS KLPNLLLQPR240
EQKPQCGVG TLLQPLVIGF PRLHLLLLL LDLPLHHPQL GEVLIVPQGL LAQILGCPDV300
VLHPLQLHRL HEHPGGGGTV RALASSLRAR SYSSFSDSSF TAASQISSLL GLAWKARARM360
LLAAGTSPAS HLDLAPMSHS TSALGQWATA LCRSASRDSR VPEFFSKYAA RSHTLFLLLGN420
TCRA

```

424

(2) INFORMATION ON SEQ ID NO. 420:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 109 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 420:

```

GRTLPRGGGT VWVQGHGLEG WWAALSGSGF PAVGFLFWLL RLVYFLSLLP VTPGAPEYRL 60
FSPWAVSLSC FLTLLPGLLC VHLRLAWSKQ VRPLLLYSLV LFWHLVKLA

```

109

(2) INFORMATION ON SEQ ID NO. 421:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 177 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 421:

VSVPSSSAAG TLFQGLCGAP DAPHPLSKIP GGRGGGRDPS LSALIYKDEK LTVTQDLFVN 60
 DGKPHIVHFQ YEVEVKVSS WDAVLSSQSL FVEIPDGLLA DGSKEGLLAL LEFAEEKMKV120
 NYVFICFRKG REDRAPLLKT FSFLGFEIVR PGHPCVPSRP DVMFMVYPLD QNLSDED 177

(2) INFORMATION ON SEQ ID NO. 422:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 114 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 422:

ASRPYILELR EKDPCRPLAH RGSSTVGEGH QEHHRGPGTM CLQHWSWGHL LNGKILLSWV 60
 FIILGGSAGG GRRRRGEWVG GRVGGCGVAR AGRSLWAKSL SGRGRVPSSC LSER 114

(2) INFORMATION ON SEQ ID NO. 426:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 50 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 426:

PFCSSLAKLQ GIWGMWDLQF PAPASALSQV LTPAPASAPA PGRAPAPAAA

50

(2) INFORMATION ON SEQ ID NO. 427:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 114 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 427:

EDKMRPGLSF LLALLFFLGQ AAGDLGDVGP PIPSPGFSSF PGVDSSSSFS SSSRSGSSSS 60
RSLGSGGSVS QLFSNFTGSV DDRGTCQCSV SLPDNNFPVD RVERWNSQLI VISQ 114

(2) INFORMATION ON SEQ ID NO. 428:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 113 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 428:

EITMSCEFQR STLSTGKLLS GRETEHWQVP RSSTEPVKLE NNWDTEPPLP KLRLELEPDL 60
ELELKLELES TPGKELKPGL GIGGPTSPKS PAAWPRKNRR ARRNERPGLI LSS 113

(2) INFORMATION ON SEQ ID NO. 429:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 50 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 429:

AAAGAGARPG AGAEAGAGVN TWERAEGAG NWRSHIPQIP CSLAKEEQKG

50

(2) INFORMATION ON SEQ ID NO. 430:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 224 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 430:

QTQKVVTSPF RITLHWLLPC AAHPPDLHKK GQENSGCAPA TAHSAPPGRS PPELRAGLQR 60
 LARAVLPVSR FSAPQPPAAS FSGPRVAPSE ESGPGTSSNS GRLALPRLRS LCPLGVARPR120
 CCRALARCCC SSSERTAAWA RRAGSSSLAS PTSPTSDELQ AHFGQPAAVP RHRIPEHAAA180
 QPAGPRDHEG GAGAGRRLLD AGHEAVPPGH QEVPVLALRP RLPR 224

(2) INFORMATION ON SEQ ID NO. 431:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 408 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 431:

```
PALLGLPFIG SSLAPPTLQI CIKKAKKTLA VPQORLILLP RVGAPRSCAR ACSASPALSS 60
RCPASPRPSR RLPAFRGPEH HPAKRAGPGQ ARTPAASFPF GSAPSAPSGS RAHDAAGPWL120
AAAAALPRLAL LPGLGARALP LWPARLLLQA QNCKPIPANL QLCHGIEYQN MRLPNLLGHE180
TMKEVLEQAG AWIPLVMKQC HPDTKKFLCS LFAPVCLDDL DETIQPCHSL CVQVKDRCAP240
VMSAFGFPWP DMLECDRFPQ DNDLCIPLAS SDHLLPATEE APKVCEACKN KNDDNDNDIME300
TLCKNDFALK IKVKEITYIN RDTKIILETK SKTIYKLVGV SERDLKKSVL WLKDSLQCTC360
EEMNDINAPY LVMGQKQGGG LVITSVKRWQ KGQREFKRIS RSIRKLQC 408
```

(2) INFORMATION ON SEQ ID NO. 432:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 323 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 432:

```
VISFTFIFSA KSFLQSVSIM SLSSSFLLFQ ASHTFGASSV AGRRWSLLAR GMQRSLSWGK 60
RSHSSMSGQG KPKADMTGAQ RSFTCTQSEW HGWMVSSRSS RQTGAKSEHR NFLVSGWHCF120
MTSGIQAPAC SSTSFVSWP SRLGSRMFY SMPWHSCRLA GMGLQFCACR RSRAGQRGRA180
RAPSPGSSAR RGRAAAASQG PAASWARDPE GAEGAEPGKG EAAGVRACPG PALFAGCDGSG240
PRKAGSRRLG RGEAGHREDS AGEALQARAQ LRGAPTRGSR MSRCWGTARV FLAFFMQIWR300
VGGAREEPMK GNPRRAGHYF LGL 323
```

(2) INFORMATION ON SEQ ID NO. 433:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 333 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 433:

```
RGRTWELFLA GRRVLVTGAG KGIGRGTVQA LHATGARVVA VSRTQADLDS LVRECPGIEP 60
VCVDLGDWEA TERALGSVGP VDLRGDCADM ELFLAGRRVL VTGAGKGIGR GTVQALHATG120
ARVVAVSRTQ ADLDSLVREC PGIEPVCDL GDWEATERAL GSVGPDLLV NNAAVALLQF180
FLEVTKEAFD RSFEVNLRAV IQVSQIVARG LIARGVPGAI VNVSSQCSQR AVTNHVSVC240
TKGALDMLTK VMALELGPBK IRVNAVNPV VMTSMGQATW SDPHKAKTML NRIPLGKFAE300
VEHVVNAILF LLSDRSGMTT GSTLPVEGGF WAC 333
```

(2) INFORMATION ON SEQ ID NO. 434:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 210 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 434:

```
APGHNLRLHD DRTQVHLKGS VKGLLGDLQE GLQQGDSGVV HQQVHGAHAA QRPLGGLPVT 60
QVHANGFYPR ALADKAVKIR LSPAHSHHPR ARRQRLDRA APYTFACPGD QHPAAREEQ120
HVGAVSAQVH GAHAAQRPLG GLPVTQVHAH GFYPRALADK AVKIRLSPAH SHHPRARRVQ180
RLDRAAPYTF AC7GDQHPAA REEQLPSCPT 210
```

(2) INFORMATION ON SEQ ID NO. 435:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 132 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 435:

```
FFFFFFFFFL GSRIRFIGGI GGRMSTAWGL RCVEGAQQAQ KPPSTGKVEP VVMPLRSLSR 60
KRMAFTTCST SANLPSGIRF SIVLALWGSQ QVAVPMDVIT TVGFTAFTRI LWGPSSRAIT120
LVSMSRAPLV EQ 132
```

(2) INFORMATION ON SEQ ID NO. 436:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 436:

KAKSWVPSDF RFQELPENTR SQRVIEWSLF CRDSWEYGHP APRCGNESSR SGEAALADVQ60
 LAAPVSNQLH PDGVEDRGVG GLLPELHAE PYLV 94

(2) INFORMATION ON SEQ ID NO. 437:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 70 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 437:

FSGVCFAGIA GSMATLLHDA VMNPAEVVKQ RLQMYNSQHR SAISCIRTVW RTEGLGAFYR60
 SYTTPSPISC 70

(2) INFORMATION ON SEQ ID NO. 438:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 438:

KAPNPSVLHT VRMQLIADRC CELYICKRCF TTSAGFITAS WSRVAILPAI PAKQTPENYP60
LRSGVLRKFL EPKIRRNPGI SFLRSKMYIQ SAQVSTDS 98

(2) INFORMATION ON SEQ ID NO. 439:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 270 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 439:

RSVVRCLKM AAEEPQQQKQ EPLGSDSEGV NCLAYDEAIM AQQDRIQQEI AVQNPLVSER 60
LELSVLYKEY AEDDNIYQQK IKDLHKKYSY IRKTRPDGNC FYRAFGFSHL EALLDDSKEL120
QRFKAVSAKS KEDLVSQGET EFTIEDFHNT FMDLIEQVEK QTSVADLLAS FNDQSTSOYLI80
VVYLRLLTSG YLQRESKFFE HFIEGGRTVK EFCQQEVEPM CKESDHIHII ALAQALSVSI240
QVEYMDRGEG GTTNPHIFPE GFRAQGLTLF 270

(2) INFORMATION ON SEQ ID NO. 440:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 145 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 440:

RWRRRLSSR SRSRWAATPK VLTVPMMKP SWLSRTEFSK RLLCRTLWCQ SGWSSRSYTR 60
SMLKMTTSIN RRSRTSTKST RTSARPLTA TVSIGLSDSP TWRHCWMTAR SCSGSRLCLP120
RARKTWCPR SLNSQLRIST TRSWT 145

(2) INFORMATION ON SEQ ID NO. 441:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 210 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 441:

IAPSRLKQ GK TLGSEALRED VRIGGAALAA VHVLHLDGHA EGLGQRNDVD VVALLAHGLH 60
 LLLAELLDSP STLDEVLEEL ALALQVARGE QPQVDHKVVG GALVIEGGQQ VGDRLLLHL120
 LNQVHERVVE ILNCFSEAL GHQVFLALGR HSLEPLQLLA VIQQCLQVGE SESPIETVAV180
 RPGLADVRVL FVEVLDLLLI DVIIFSILLV 210

(2) INFORMATION ON SEQ ID NO. 442:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 322 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 442:

NSERGRLOAM MTHLHVKSTE PKAAPQPLNL VSSVTLKS SA SEASPQSLPH TPTTPTAPLT 60
 PVTQGSPVIT TSMHTVGPI RRRYSKYNV PISSADIAQN QEFYKNAEVR PPFTYASLIR120
 QAILESPEKQ LTLNEIYNWF TRMFAYFRRN AATWKNVVRH NLSLHKCFVR VENVKGAVWT180
 VDEVEFQKRR POKISGNPSL IKNMQSSHAY CTPLNAALQA SMAENSIPLY TTASMGNTL240
 GNLASAIREE LNGAMEHTNS NESDSSPGRS PMQAVHPVHV KEEPLDPEEA EGPLSLVTTA300
 NHSPDFDHDR DYEDFPVND ME 322

(2) INFORMATION ON SEQ ID NO. 443:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 103 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 443:

FGTRAPASHD DPPACEVYRT QSCPSAPESG IKCHPLQVRI GGFSTELTSY SNDPNRPPDS 60
 RHPRLCHHN HQHAHGGTHP QAVLRQIQRA HFVSRYCAEP RIL 103

(2) INFORMATION ON SEQ ID NO. 444:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 444:

SLSWKSGLW LAVVTKDRGP SASSGSRGSS LTCTGCTACI GDLPGLLSLS LLVCSIAPF 60
 SSSRIALAKL PRVGFPMEAV VYRGILFSAI EACKAALRGV Q 101

(2) INFORMATION ON SEQ ID NO. 445:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 539 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 445:

```
LDVQVKDDSR ALTGLALTLP LARLLTAPEL ILQWFQLSS SGPNSRLYMK LVMRILYLD 60
SEICFPTVPG CPGAWDVDSE NPQRGSSVDA PPRPCHTTPD SQFGTEHVLR IHVLEAQDLI120
AKDRFLGGLV KKGSDPYVKL KLAGRSFRSH VVREDLNPRW NEVFVIVTS VPGQELEVEV180
FDKDLKDDF LGRCKVRLTT VLNSGFLDEW LTLEDVPSGR LHLRLERLTP RPTAAELEEV240
LQVNSLIQTQ KSAELAAALL SIYMERADL PLRKGTKHLS PYATLTVGDS SHKTKTISQT300
SAPVWDESAS FLIRKPHTES LELQVRGEGT GVLGSLSLPL SELLVADQLC LDRWFTLSSG360
QGQVLLRAQL GILVSQHSV EAHSHSYSHS SSSLSEEPPEL SGGPPHITSS APELRQLTH420
VDSPLAPAG PLGQVKLTW YYSEERKLVS IVHGCRSLRQ NGRDPPDPYV SLLLLPDKNR480
GKRRTSQKK RTLSPEFNER FEWELPLDEA QRRKLDVSVK SNSSFMSRER DCWGRCSWT 539
```

(2) INFORMATION ON SEQ ID NO. 446:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 99 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 446:

```
LLCLPAFVSL HHRLNVMSLK LGSKGRACAL QPFHLTGYPY GLCLTKEKNR MFPLLHGLYP60
SGPLGRGPPEL AVSCFACTLF SLPPNSSGPS VSVPGWQH 99
```

(2) INFORMATION ON SEQ ID NO. 447:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 112 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 447:

VWIKLFTCST SSNSAAVGRG VRRSRRKCRR PDGTSSRVSH SSRKPLFKTV VRRTLHLPRK 60
 SSLSKSLSKT STSSSWPGTD VTITSKTSFQ RGLASSRTTW LRKLRPANFS LT 112

(2) INFORMATION ON SEQ ID NO. 451:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 56 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 451:

FFFFFFVETGF RHVDETGLEL LASSDLPPQL LKVLGLYRHE PLSLALKRFS QRPSVR 56

(2) INFORMATION ON SEQ ID NO. 452:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 56 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 452:

IRFGISCPGP GISLQEPLPL CWRHSFRIRR RREKRKCKGG RSFPGRITISV THMDPR 56

(2) INFORMATION ON SEQ ID NO. 453:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 57 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 453:

VTEMVRPGKD LPPLHFLFSL LLLILKLCLO QRGSGSCREI PGPQQEMPNI IYLTEGL 57

(2) INFORMATION ON SEQ ID NO. 454:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 454:

ILAFWRAAPL WHHQTLLCFP STWNSSNIRG CEGLAILLSW VHVSDRNGAA WERSPSFTFS60
LLPPPPYSKT VPPTGQGLL 80

(2) INFORMATION ON SEQ ID NO. 455:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 182 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 455:

ARLPLLAED RGQPGSVKDP KMAGRKLALK TIDWVAF AEI IPQNQKAIAS SLKSWNETLT 60
SRLAALPENP PAIDWAYYKA NVAKAGLVDD FEKKFNALKV PVPEDKYTAQ VDAEEKEDVK120
SCAEWVSLSK ARIVEYEKEM EKMKNLIPFD QMTIEDLNEA FPETKLDKKK YPYWPHQPIE180
NL 182

(2) INFORMATION ON SEQ ID NO. 456:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 76 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 456:

AQSIAGGFSG KAALEVRVS EQDFRELAMA FWFWMISAK ATQSMVERAS FRPAILGSFT60
 DPGCPRSSAA SNGSRA 76

(2) INFORMATION ON SEQ ID NO. 457:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 104 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 457:

CPECVIQGPE LPPGLNFINS QLVGEANRDT FSCLIWFLGK LHSSPQWSSD QMELSSSSSP 60
 SLSHILQSWP LRETPTQHKI SHLLFLRHPP GQYIYPLARE PSAH 104

(2) INFORMATION ON SEQ ID NO. 458:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 223 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 458:

```
RGAGGHQGES GRPEGWPPPF LHPRGRFQVP WLESVLIVVS NNIDEEALAR LAQEGSEVNV 60
IGIGTSVVTC PQQPSLGGVY KLVAVGGQPR MKLTEDPEKQ TLPGSKAAFR LLGSDGSPLM120
DMLQLAEEPV PQAGQELRVW PPGAQEPCTV RPAQVEPLL R LCLQQGQLCE PLPSLAESRA180
LAQLSLSRSL PEHRRRLSPA QYQVVLSERL QALVNSLCAG QSP 223
```

(2) INFORMATION ON SEQ ID NO. 459:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 157 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 459:

```
VIRVVSSQPR SESQGDPAH RLFTACSLS DSTTWYCAGL RSRLCSGLSR LRDSWAKALD 60
SARDGSGSHS CPCWRQSRSS GSTWAGLTVQ GSWAPGGHTL SSCPACGTGS SANCSMSMSG120
DPSEPRSRKA ALLPGNVCFS GSSVSFIRGW PPTATSL 157
```

(2) INFORMATION ON SEQ ID NO. 460:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 93 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 460:

```
PPLFPHLLFL WGVSDSCCF QSAPLRVSGG LPRTQTVHQG LQPLGQHHLV LCRAPQPPVL60
RAESAQQQLG QGSRLCQWE RLTLQLSLEA EPQ 93
```


(2) INFORMATION ON SEQ ID NO. 461:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 328 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 461:

```

FSLILCKHSI GDRKNYASAK LSELLPEEVE AEVKAAAEIS MGTEVSEEDI CNILHLCTQV 60
IEISEYRTQL YEYLQNRMMMA IAPNVTVMVG ELVGARLIAH AGSLLNLAKH AASTVQILGA120
EKALFRALKS RRDTPKYGLI YHASLVGQTS PKHKGKISRM LAAKTVLAIR YDAFGEDSSS180
AMGVENRAKL EARLRTLEDR GIRKISGTGK ALAKTEKYEH KSEVKTYDPS GDSTLPTCSK240
KRKIEQVDKE DEITEKKAKK AKIKVKVEEE EEEKVAEEEEE TSVKKKKKKRG KKKHIKEEPL300
SEEEPCTSTA IASPEKKKKK KKKRENEE                                     328

```

(2) INFORMATION ON SEQ ID NO. 462:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 124 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 462:

```

YNRNSFLLIL VLSLFFLFLL FLWTSNCCAG TWFFLRKWFF LNVFLFTPFL LLLHRCFFFF 60
CHFFFFLFFN FNFNLGFFGF LFSNFILEFY LFYFAFFRTG WKCGVTRIV SLHFTFVFIF120
FCFC                                             124

```

(2) INFORMATION ON SEQ ID NO. 463:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 463:

SSFSLFFFFFF FFFSGLAIAV LVHGSSSESG SSLMCFFLPL FFFFTDVSS SSATFSSSSS 60
STLTLILAFL AFFSVISSSL STCSILRFLE QVGSVESPEG S 101

(2) INFORMATION ON SEQ ID NO. 464:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 427 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 464:

GGSSRRHGGG YAAVALLVLL LLGPGGWCLA EPPRDSLREE LVITPLPSGD VAATFQFRTR 60
WDESELQREGV SHYRLFPKAL GQLISKYSLR ELHLSFTQGF WRTRYWGPPF LQAPSGAELW120
VWFQDTVTDV DKSWKELSNV LSGIFCASLN FIDSTNTVTP TASFKPLGLA NTDHYFLRY180
AVLPREVVCT ENLTPWKLL PCSSKAGLSV LLKADRLEHT SYHSQAVHIR PVCARNARCTS240
ISWELRQTLS VVFDAFITGQ GKKDWSLFRM FSRTLTEPCP LASESRVYVD ITTYNQDNET300
LEVHPPPTTT YQDVILGTRK TYAIYDLLDT AMINNSRNLN IQLKWKRPE NEAPPVPFLH360
AQRVSGYGL QKGELSTLLY NTHPYRAFPV LLLDTVPWYL RLLHPLPACP GPAATPPP420
ADSAAGQ 427

(2) INFORMATION ON SEQ ID NO. 465:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 128 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 465:

SPSILYGSCT CHSHKAFGGP DTGGHPSCR P HQVQSCGSGS KTLSLMWINL GRSSVMSSQG 60
SSAPLSTSSST PPTQSLPLPP SNPWWPMTL TTTCAMLCC RGRWSAPKTS PPGRSSCPVV120
PRQASLCC 128

(2) INFORMATION ON SEQ ID NO. 466:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 124 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 466:

PQAWRRRLCRC CSAREVAPGA RRLVPCRTPT RQFAGGTCHH PAAFRGRSRH IPVPHALGFG 60
ASAGRSVPLQ ALSQSPGAAD LQVFSTGAAP VIHTRLLEDP ILGATLPAGP IRCRAVGLVP120
RHCH 124

(2) INFORMATION ON SEQ ID NO. 467:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 106 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 467:

FLHKTHNRAV EEAKEPFLCL CSRTERGPLA SVSLLVLPGL YQALRRGMET PHSGAWLGEG 60
EAAGVLWASR GYNLSSLGNV CPFVGSSPTR RGTQLYTGTI CVWSVL 106

(2) INFORMATION ON SEQ ID NO. 468:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 164 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 468:

```
ISTKQTTTHRL SQCKVESPDV SDYCLQMDTR SPESSDYTLE KPKEPLPPPL PQARPOSGAF 60
PYPASRPGTV REEPAGSRWP EGLSQSYRIG IKRAPLLPPQ PCCESCAGIN LRNSPEAETG120
LMPWERSECE PMAFSLGTDN LPKYVKAEGD RDLAEGRKSF SSRN 164
```

(2) INFORMATION ON SEQ ID NO. 469:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 469:

```
EIRGRPPLEF PPLSCVDEFL QNRPHDTCPS VKLSPPTCRT TAYKWTHVPQ RAQIIPSRSP 60
KNPCRLPFEPK PGPRVGRFHT PPQGLVQSGK NQQAHAQORA SLSPTTEA 108
```

(2) INFORMATION ON SEQ ID NO. 470:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 317 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 470:

```
NMVDYYEVLG VQRHASPEDI KKAYRKLALK WHPOKNPENK EEAERKFKQV AEAYEVLSDA 60
KKRDIYDKYG KEGLNGGGGG GSHFDSPF EF GETFRNPDDV FREFFGGROP FSFDFFEDPF120
EDFFGNRRGP RGSRSRGTGS FFSAFSGFPS FGSGFSSFD T GFTSFGSLGH GGLTSFSSTS180
FGGSGMGNFK SISTSTKMVN GRKITT KRIV ENGQERVEVE EDGQLKSLTI NGVADDDALA240
EERMRRGQNA LPAQPAGLRP PKPPRPASLL RHAPHCLSEE EGEQDRPGAP GPWDPLGVRS300
RIERRWQEEE AEAERGV                                     317
```

(2) INFORMATION ON SEQ ID NO. 471:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 123 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 471:

```
SMPLVQLPSS FKLLSLLLLL PLATFFQSCC GRRGGPRARV PQVGPARPPP QRDSEARVSA 60
ARQAGAASAG GGRQAGLAGR SGLSACAPQR GHRRRPHHLL LRTLGHLLQ LLLFLDRSRQ120
FSL                                     123
```

(2) INFORMATION ON SEQ ID NO. 472:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 105 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 472:

KIRSNQCLWS NFLPPSNSSL CFCFFLLPPS FNPAADAEGV PGPGCPRSVL LALLLRETVR 60
RVSQQRGRPG RLRAEAGRL GWQGVLASPH ALLSEGIVVG HTIYC 105

(2) INFORMATION ON SEQ ID NO. 473:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 159 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 473:

IVSERSLRSL WTAHWALPEM DSRIPYDDYP VVFLPAYENP PAWIPPHERV HHPDYNNELT 60
QFLPRTITLK KPPGAQLGFN IRGGKASQLG IFISKVIPDS DAHRAGLQEG DQVLAVNDVD120
FQDIEHSKAV EILKTAREIS MRVRFPPYNY HRQKERTVH 159

(2) INFORMATION ON SEQ ID NO. 474:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 75 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 474:

PPTGRPPPEF FFFFFFFSIY FYFLGERLGG GRGENSVSLE SQKCMNLLVV QGWDKMAREV60
RWKIPKILFA TDFYN 75

(2) INFORMATION ON SEQ ID NO. 475:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 97 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 475:

LGGLSSSDVK SQLSSRRLQ CDGSGQKLGQ LIVVVRVVYP LMRNPCWRI LIGRQENHRV60
VIIRNPAVHL GQGPVGPQR PQTPLTNSV WEPEADA 97

(2) INFORMATION ON SEQ ID NO. 476:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 274 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 476:

GHLWRPAGGR LPRHHDQVCR AAEPHRGGGL CGHQRRLPHR PRVQEGWGLC PHESLHQVPA 60
DRPWHEPGAG CAADCEDPHR RPGACEPGAP PAARAAGLGR GTRHGNGDIL SFEDANRAMQ120
TGVGTGIMIAR GALLKPWLET EIKEQRHWDI SSSERLDILR DFTNYGLEHW GSDTQGVEKT180
RRFLEWLSF LCRYDPVGLL ERLPQRINER PPYYLGRDYL ETLMASQKAA DWIRISEMLL240
GPVPPTSPSC RSTRPRTSS LRLSQGHPGA RRVQ 274

(2) INFORMATION ON SEQ ID NO. 477:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 256 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 477:

```
AGPAPVQPGP HTRCRCPRGH GSRGRSQAGK LWCPAGPRRP GTSTPPSSPV RTCGPLTDED 60
VVRLRPCEKK RLDIRGKLYL APLTTCGNLP FRRICKRFGA DVTCGEMAVC TNLLQGQMSE120
WALLKRHQCE DIFGVQLEGA FPDMTKCAE LLSRTVEVDF VDINVGCPID LVYKKGGGCA180
LMNRSTKFQQ IVRGMNQVLD VPLTVKIRTG VQERVNLAHR LLPELRDWGV ALVTEMGTS240
HLRMPTAPCR LVSPGS 256
```

(2) INFORMATION ON SEQ ID NO. 478:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 165 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 478:

```
NLLYSRPRV PLGKPEATCT RWPCASARRR GGGHWPKEHL ADADPVGCLL AGHQRLQVVA 60
AQVVGRPLVD PLWEPLQPH GIVPAQEGQP LEQKAPGLLH ALRVRAVLQ AVVGEVPQDV120
QALGRDVPV PLLDLREEP RLEQGATGNH DPGDTS LHGA VGILK 165
```

(2) INFORMATION ON SEQ ID NO. 479:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 262 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 479:

```
GSPMSPARAM QTLFVPEHGD HGAGVCSDDH HRGGHVPAEP LQAVCTVLHQ PAQPGAEERR 60
CPVLRMPVA SETQCQATES QSRSLTPRLG PPTAWPCALR PAERFPPLPA QCLLHVQLQT120
LFVPEHGDHG AGVCSDDHHR GGHVPAEPLQ AVCTVLHQPA QPGAEERRCP VLRMPVALG180
EHSVRQRNPR AAGLRPASAH RPPGRAALRP AGALPPLPAH LSVPAARDRP AAHHLAVRRG240
GAPTLPGPLD LQSGGPRGGV GN 262
```

(2) INFORMATION ON SEQ ID NO. 480:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 270 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 480:

```
AAQCLLHVQC KRSLFQSMET TELEFVQIII IVVVTCLLSH YKLSARSFIS RHSQGRRED 60
ALSSEGCLWP RRHSVRQRNP RAAVLRPASA HRPPGRAPFA QRSVFHRCQP NVSCTCNCKR120
SLFQSMETITE LEFVQIIIV VVTCLLSHYK LSARSFISRH SQGRREDAL SSEGCLWPSE180
STVSGNGIPE PQVYAPPRPT DRLAVPPFAQ RERFHRFQPT YPYLQHEIDL PPTISLSDGE240
EPPPYQGPWT FKVRDPEEEL EIERGLGAET 270
```

(2) INFORMATION ON SEQ ID NO. 481:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 124 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 481:

```
ATTSC LHGPS SAGTARGGGE KMPCPQKDAC GPRRAQCQAT ESQSRSTPR LGPPTAWPCR 60
PSPSGSASTA SSPPIRTCST RSTCRPPSRC QTGRSPHPTR APGPSRFGTF RRSWKLNWDW120
VRRP 124
```

(2) INFORMATION ON SEQ ID NO. 482:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 99 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 482:

RVLVSPLSLS MWRWKVEKDT VSILKLLRFS ERGRHLNRQV GFSVLSALGI WREMGLLSLC60
 TQEGHALKTV FVDQRRLYST GGIQMSLRGR EETWQADYI 99

(2) INFORMATION ON SEQ ID NO. 483:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 104 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 483:

VLEEEKKHKGK QITSEPFELC FSFFPCLFSK IYLNLETQDI FLGNLLPMSE VASAASRQIP 60
 GNPEPQNVIP PGSAWPDVPL SAGFTYQSHS SFSINTPKSS PNHH 104

(2) INFORMATION ON SEQ ID NO. 484:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 123 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 484:

```
KLDSTQCRPS LHTNMYVLLS ECHLLCTQCH DSKIKISVSN QNINQARNSW AQRGVRGLSY 60
TAVKQPTCSA HSQAESDWSC RQRGGGRVLC CPLLCMVSWS FQGGQLLSPN KTVNSLRTP120
LPH 123
```

(2) INFORMATION ON SEQ ID NO. 485:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 303 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 485:

```
LGRKPSWVGG AGLEPSQGS LSHHPAPQSD SAPTSPPIPG EPGPQREV DK WGGSLGRPES 60
SGHPGRTPAT CCHCAVMAR SGSATPFARA PGAPPRSPQ RLVQDVSGPL RELRPRLCHL120
RKGPQGYGFN LHSDKSRPGQ YIRSVDPGSP AARSGLRAQD RLIEVNGQNV EGLRHAENVVA180
SIKAREDEAR LLVDPETDE HFKRLRVPTPT EEHVEGPLPS PVTNGTSPAQ LNNGSACSSR240
SDLPGSDKDT EDGSAWKQDP FQESGLHLSP TAAEAKEKAR AMRVNKRAPQ MDWNRKREIF300
SNF 303
```

(2) INFORMATION ON SEQ ID NO. 486:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 149 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 486:

```
APRRPRPRRR LEPCESTSAR HRWTGTGSVK SSATSEPLPA CLGTLGPLPH GPWASACPEL 60
PQPQWTGGWS CHCPEISPS GEPPSCPCPP GTGGLWQQOR GRETQRCERE SETETERERE120
RHRERQRESE RARGSRGARA FAALPGPAD 149
```

(2) INFORMATION ON SEQ ID NO. 487:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 217 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 487:

```

FLNGNRTTLQ STEAGGARGR LRPKVRAGGV PGSRDRQEGA QKLLKISRFL FQSICGARLL 60
TRMARAFSLA SAAVGLRWRP LSWKGSCFQA LPSSVSLSEP GRSLRDEHAE PPLSWAGLVP120
LVTGDGRGPS TCSSVGVTRS RLKCSSVSGS TTSSRASSR ALMLATTS AW RSPSTFCPFT180
SMRSWARRP ERAAGEPGST ERMYPGRDL SLCLNP                                217

```

(2) INFORMATION ON SEQ ID NO. 488:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 298 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 488:

```

EIRAVGGGVC VDGMGTPGEG LGRCSHALIR GVPESLASGE GAGAGLPALD LAKAQREHGV 60
LGGKLRQRLG LQLELPPEE SLPLGPLLGD TAVIQGDTAL ITREPWPARR PEVDGVRKAL120
QDLGLRIVEI GDENATLDGT DVLFTGREFF VGLSKWTNHR GAEIVADTFR DFAVSTVPVS180
GPSHLRGLCG MGGPRTVVAG SSDAAQKAVR AMAVLTDHPY ASLTLPODAA ADCLFLRPGL240
PGVPPFLLHR GGGDLPSNQE ALQKLSDVTL VPVSCSELEK AGAGLSSLCL VLSTRPHS 298

```

(2) INFORMATION ON SEQ ID NO. 489:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 175 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 489:

```
AGHRYQGDIR ELLQCLLAGV QIPTSTVQEE RGHTRQPRTK KETVSSCVIW EGQGGIWVIC 60
QHCHCPDSSL GSVAAACHNS ARSPHAAETA QVGGTRDWHG GDGEVPERVR HDLSSSVIGP120
FGEAYEKLPA GEENVSAIQR RVLVSYPHNS EPQVLQGFAD SIDLWPTSGA PGPRD      175
```

(2) INFORMATION ON SEQ ID NO. 490:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 150 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 490:

```
LGPCPLGSRP CRQAAVPAAM TPQVAVLAHV APVVASVYLE APRAPFELWP DPEREGQPPH 60
LPPTPGSLGL PGSGHGSSGP APPFASPSHP HRLPLQPLGF LSFLVSSPVS SGHPHSCRAV120
ISAGAPPPED RVGEGGSPRL QASGTGSSGF      150
```

(2) INFORMATION ON SEQ ID NO. 491:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 89 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 491:

FVKRTKQPRQ TLDAPCSALR LWGRCLLGEA VAQGVHCEAG PVDSAGGIHL ASGCLVSVYS60
DIAFCCHLSC GQRGVSWHEN IFFFKCGSF 89

(2) INFORMATION ON SEQ ID NO. 492:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 63 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 492:

LTHLLFEKCL LPSLGLITKF DHDHIVVSQS ALEIVSGLHE VAMGVWSTLK LYQSCTYFQT60
FLK 63

(2) INFORMATION ON SEQ ID NO. 493:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 73 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 493:

DGSRMLCHYI QKQDNLKLNG CPLQSQQVQP HSARPELQPL PKGIFPTAST PSKEHQGFVS60
VVLFFLQTID IYS 73

(2) INFORMATION ON SEQ ID NO. 494:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 318 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 494:

KCATFWSFPR RQGGGLGIAIS EEDTLSGVII KSLTEHGVA TDGRLKVG DQ ILAVDDEIVV 60
 GYPIEKFISL LKTAKMTVKL TIHAENPDSQ AVPSAAGAAS GEKKNSSQSL MVPQSGSPEP120
 ESIRNTSRSS TPAIFASDPA TCPPIPGCET TIEISKGR TG LGLSIVGGSD TLLGAI IHE180
 VYEEGAACKD GRLWAGDQIL EVNGIDLRKA THDEAINVLR QTPQVRVLT L YRDEAPYKEE240
 EVCDTLTIEL QKKPGKGLGL SIVGKRNDTG VVVS DIVKGG IADADGRLMQ GDQILMVNGE300
 DVRNATQEAV AVWIKVFP 318

(2) INFORMATION ON SEQ ID NO. 495:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 206 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 495:

SAFAEMGSDH TQSSASKISQ DVDKEDEFGY SWKNIRERYG TLTGELHME LEKGHSGLGL 60
 SLAGNKDRSR MSVFIVGIDF NGAAGKDGR L QIADALLEIN GQILYGRSHQ NASSIIKCAP120
 SKVKIIFIRN KDAVNQMAVC PGNAVEPLPS NSEN LQNKET EPTVTTSDAA VDLSSFKNVQ180
 HSGASQGGRG VWVLLSAKKI HSVES 206

(2) INFORMATION ON SEQ ID NO. 496:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 119 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 496:

TSWIIMAPSS VSEPPTMLRP SPVRPLEISM VVSQPGIMGQ VAGSEAKIAG VDDLLVFRMD 60
SGSGEPDCGT IRDWELFFFS PLAAPAAEGT AWESGFSAWM VSFTVIFAVF RRLINFSIG 119

(2) INFORMATION ON SEQ ID NO. 497:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 497:

SAPSLTKCRS THVYPLSLIM FMSGGSSRST LRRMVPTPST TSLSPRSSSS TSKLLTQSGP60
SLPQPPASRP F 71

(2) INFORMATION ON SEQ ID NO. 498:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 139 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 498:

SRSPACGASE HGDGAMSLIC SISNEVPEHP CVSPVSNHVY ERRLLIEKYIA ENGTDPINNQ 60
PLSEEQQLIDI KVAHPIRPKP PSATSIPAIL KALQDEWDAV MLHSFTLRQS CRQPAKSCHT120
LCTSTMPPAV SLPVSPRKL 139

(2) INFORMATION ON SEQ ID NO. 499:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 74 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 499:

TTGRERGCRP CAGLFYCFLF LMKLDHCLQN PAQALLPIPF TVSLVRRAMT RQAASCWYRA60
CDSSWRVVCS SGAE 74

(2) INFORMATION ON SEQ ID NO. 500:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 71 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 500:

FSFFNETRSL LTKPCTSPPA HPLHSSLGSA SPVSQELQQN GCGTATTTSI ERQEGRGAVG60
LVQGGFIVFF F 71

(2) INFORMATION ON SEQ ID NO. 501:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 284 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 501:

```

EARGLATRTR SGAAAHAGDR FTDADDVAIL TYVKENARSP SSVTGNALWK AMEKSSLTQH 60
SWQSLKDRYL KHLRGQEHKY LLGDAPVSPS SQKLKRKAE DPEAADSGEP QNKRTPOLPE120
EEYVKEEIQE NEEAVKKMLV EATREFEEVV VDESPPDFEI HITMCDDDDPP TPPEEDSETQP180
DEEEEEEEEEK VSQPEVGAAI KIIRQLMEKF NLDLSTVTQA FLKNSGELEA TSAFLASGQR240
ADGYPIWSRQ DDIDLQKDDE DTREALVKKF GAQNVARRIE FRKK 284

```

(2) INFORMATION ON SEQ ID NO. 502:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 123 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 502:

```

ETFSSSSSSS SSGCVSESSS GVGGSSSHIV ICISKSGGLS STTTSSNSRV ASTSIFLTAS 60
SFSWISSFTY SSSGKSGVLL FCGSPLSAAS GSSSAFRLSF WEEGLTGASP SRYLCSWPRR120
CLR 123

```

(2) INFORMATION ON SEQ ID NO. 503:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 175 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 503:

VFLRCGWIII THSYMYFKIR RALIHNNLLK LPGGFHKHLF DCFFILLDFF LHILFFRQIW 60
SSLILWFPAI RGLRVLLRLP LELLGGGAHR RVPQQVLMML APQVLEVAVL QGLPRVLRER120
ALLHRFPQGV TGDGAGRAGI FLHVGKDGIV VRIREAIARV RCRSAPRARR QAPGF 175

(2) INFORMATION ON SEQ ID NO. 504:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 78 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 504:

CPPEKSLQMF QPLSSPDSHR KGTGFGLGIV FSLTFFKRRM WPLAFGSGMG LGMAYSNCQH60
DFQAPYLLHG KYVKEQEQ 78

(2) INFORMATION ON SEQ ID NO. 505:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 95 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 505:

SKTSTLPVAI WTRQRLEHLQ GFLGWTSITR ILSSRPHPD TGPTSCRAFT QTCSPPPAPPA60
 FLSAGPRAPT PESLARAGNK SQVRKAGADA PDIAI 95

(2) INFORMATION ON SEQ ID NO. 506:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 156 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 506:

AIPNPMPEPK ANGHILLKK VSEKTIPNPK PVFPLWLSGL DRGWNICRDF SGGHQLPGFY 60
 LHDRIQTPV PLPAELRLRH VPHRLQLSS RPAPALRPLK VSRELETSPR SGRQAQTLQI120
 SRDDPLLPSL PVFSVGRQGD AVVWRLEVTL TLGCAY 156

(2) INFORMATION ON SEQ ID NO. 507:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 169 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 507:

AASGMLGSWP ARTFHGACV SRRPSAPWKH TASGKDSPDL RFSEHGVSQE FWAGGLVAVL 60
 EMTSPSPWG TQEGPAGMCS LWVVGWPCR GAGVRDLVLV HAGVWCKHVC AVQRDACES120
 RTPAPPRKGG AVTSVLCFL IKTFPLFSYK FASCKQVHKD PPLVKSGFE 169

(2) INFORMATION ON SEQ ID NO. 508:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 155 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 508:

TQNTGNRSFAF PGWRWCAALS TRVSLYSTYM FTPHTCVDEH QITHPSSTTG TPADYPQAAH 60
 SGRALLGAPR GGARGHLQHC HQAASPEFLG NTVLGKPKVR AVLPRGRVLP GCGGPAADTG120
 PRVEGPGRPA SKHARRSLGE PGSVASSLLS LRSPI 155

(2) INFORMATION ON SEQ ID NO. 509:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 148 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 509:

ENRGNVLIKN KHKTLVTAPP FLGGAGVRLS PHASLCTAHT CLHHTPAWTS TRSRTPAPRQ 60
 GHQPTTHRLH IPAGPSWVPH GEGLGVISST ATRPPAQNSW ETPCSENRRS GLSFPEAVCF120
 QGAEGRRLTQ APGWKVLGQ LPSMPDAA 148

(2) INFORMATION ON SEQ ID NO. 510:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 510:

NAYISGYERD FMTIQSNITL ADRETEVFHD LPSLPASLRQ NWIPTLVFFL PFTSFSLLYN60
VLRDQNSHQN RLFLR 75

(2) INFORMATION ON SEQ ID NO. 511:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 67 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 511:

FRDTEGLLAL MTFWMGLQLM TILILEERTL LIFSPIALLR RSTSYSESLH IPLVFLQAPE60
PLVQMLY 67

(2) INFORMATION ON SEQ ID NO. 512:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 101 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 512:

IEFFFFFFFF PLRHLFNNCR NPKELASNLE VVSEAAGWLD WAQPLSCLNR PRNGIMMTMR 60
TSILSSSHCV YYVFSFNKAF VPMALGLGGR LKECVVILSK M 101

(2) INFORMATION ON SEQ ID NO. 513:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 179 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 513:

FGTMGGISDP DTLHIWKTNS LPLRFWVNIL KNPQFVFDID KTDHIDACLS VIAQAFIDAC 60
 SISDLQLGKD SPTNKLLYAK EIPEYRKIVQ RYYKQIQDMT PLSEQEMNAH LAEESRKYQN120
 EFNTNVMAAE IYKYAKRYRP QIMAALEANP TARRTQLQHK FEQVVALMED NIYECYSEA 179

(2) INFORMATION ON SEQ ID NO. 514:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 179 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 514:

DRGAPALTPG HLHPLPPVPR SVSGMEAREL VRLPHLPSTA CTVPTHLLHN VQLVLLPRAP 60
 CIQAAKHKLK ERRPPARRLQ PRNSTSSTLV QGALLELTFD WFLQLPKCY LHFFLTRRGS120
 WPQTVSSSVR FLLLGRLLE WAVPAPWGAL WASPGARVE GRDGGHRSWE PRLQEKERG 179

(2) INFORMATION ON SEQ ID NO. 515:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 200 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 515:

```
SGDRWEGMEV PRGQGGGAPV SESSPSSCPR PSRLCSVFPS LSHRHGVEDQ VEAQWASISP 60
SSSLTNSPCV SGLTVALVDV VLHQSHLLK LVLQLCPPGR GVGLQRGHD L RPIPLGVLIN120
LCHGHIGVEL ILVFPRLGQ MGIHLLAER RHVLDLLVVA LHDLPVLRNL LGVEELVGWR180
ILAQLQVRDG AGVDEGLRDD                                     200
```

(2) INFORMATION ON SEQ ID NO. 516:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 157 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 516:

```
TSMEALLFRL FKLPTTLRC IGLRRPLVTH TLRRKCEHKA SRLCHGGCCC TLEPCVGRHR 60
DWDLERGKSS AKTGGEHGR RTAAARGGSE RVLGHRRRD PDAGGLRGQD GEALQHRGWH120
IPGSETLPGR GGHVPWPRPG RRRPHMCGF WDSQSLA                                     157
```

(2) INFORMATION ON SEQ ID NO. 517:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 401 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 517:

RTRCAGSVNT KPPGFVMAAA AARWNHVWVG TETGILKGVN LQRKQANFT AGGQPRREEA 60
 VSALCWGTGG ETQMLVGCAD RTVKHFSTED GIFQGQRHCP GGEGMFRGLA QADGTLITCV120
 DSGILRVWHD KDKDTSSDPL LELRVGPGVC RMRQDPAHPH VVATGGKENA LKIWDLQGSE180
 EPVFRANKVR NDWLDLRVPI WDQDIQFLPG SQKLVTCTGY HQVRVYDPAS PQRRPVLETT240
 YGEYPLTAMT LTPGGNSVIV GNTHGQLAEI DLROGRLLGC LKGLAGSVRG LQCHPSKPLL300
 ASCGLDRVLR IHRIQNPRGL EHKVYLKSQL NCLLLSGRDN WEDEPQEPQE PNKVPLEDTE360
 TDELWASLEA AAKRKLSGLE QPQALQTRR RKKKRPGSTS P 401

(2) INFORMATION ON SEQ ID NO. 518:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 222 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 518:

SWEKLYVLVP DGNPQVQPI PHVLGPEHRF LRALQVPYLQ SILFPTCGNH MGVCWVLAHP 60
 THPRAHSQFQ EWVRGCVLVL VMPDSENPRI HTCDEGAVGL GEATEHALPA RAVSLTLEYA120
 ILGAEVLHRP VRAAHQHGLL AAGAPTQGAH CLLAPRLSSG REVRRLFSLK IYPFQDPSLG180
 ADPHMVPACS SSRHDKAWRL CVHTSGAACA SPAGVEVRCT AV 222

(2) INFORMATION ON SEQ ID NO. 519:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 86 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 519:

DPRPVSLTL ALLPRCHFLS SSVKYRLHIL SLNASTICVT PKDFWDFDET CEGEDTEKPV60
 ICKHLLLFPH HLWDISAVVS KWQIIN 86

(2) INFORMATION ON SEQ ID NO. 520:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 77 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 520:

ISSVNYHMTI QAQYKLGHCI LCGWISVAVF LTSPKKTSCR AELLVQAPDN DAPDFAFWGL60
 SLLLSHFLKL FAWPWHH 77

(2) INFORMATION ON SEQ ID NO. 521:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 521:

CGNKSCLQI TGFSVSSPSQ VSSKSQKSLG VTQIVLALSD KMCSLYLTEE ERKWHLGSSA60
 RVSKETGLGS Q 71

(2) INFORMATION ON SEQ ID NO. 528:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 120 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 528:

LTYLETTTTT PFLGRSLGFI RSVGTLEPSE APPSHGWGDS GGRGNPSEHP GGCWWSMYTA 60
LPHLFHGVPC QGQALICGEG SKQRRRPFRG GERAAPRTF SPAHDIPEKE TKIKPRGLST120

(2) INFORMATION ON SEQ ID NO. 529:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 90 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 529:

PLLKGKKLSA ALTNLSFFFF FFFFGKKPW LYSLCGDTVP FRGPSQPWGG GQWWAWESQR60
ASWRVRLHV FCSSPSFPWG PLPGSSTNMW 90

(2) INFORMATION ON SEQ ID NO. 530:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 96 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 530:

NKAPGPFYVG APLKYGMVVG REAVAQSL S PDYQLWGGFQ GARSRLGSSS HRHVGGGRKY60
LQGGTVSEEQ DGRGFSACYG ILFKEMGVKP GTVAHA 96

(2) INFORMATION ON SEQ ID NO. 531:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 497 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 531:

```
TPALVQRFRE GGSGAPEQAE CVELLLALGE PAELCEEFL AHARGRLEKE LRNLEAELGP 60
SPPAPDVLEF TDHGGSGFVG GLCQVAAAYQ ELFAAQGPAG AEKLAAFARQ LGSRYFALVE120
RRLAQEQGGG DNSLLVRALD RFHRRLRAPG ALLAAAGLAD AATEIVERVA RERLGHHLQG180
LRAAFLGCLT DVRQALAAPR VAGKEGPGLA ELLANVASSI LSHIKASLAA VHLFTAKEVS240
FSNKPYFRGE FCSQGVREGL IVGFVHSMCQ TAQSFCDSPG EKGATPPAL LLLLSRLCLD300
YETATISYIL TLTDEQFLVQ DQFPVTPVST LCAEARETAR RLLTHYVKVQ GLVISQMLRK360
SVETRDWLST LEPRNVRAVM KRVVEDTTAI DVQVGLLYEE GVRKAQSSDS SKRTFSVYSS420
SRQQGRYAPS YTPSAPMDTN LLSNIQKLF S ERIDVFSPVE FNKVSVLGTI IKISLKTLAG480
SVCGLRTFLA LCGLQQG                                     497
```

(2) INFORMATION ON SEQ ID NO. 532:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 153 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 532:

```
CGSGWSWPHW PATRPGQGPP SQPREVLPA GGRLSGSPGR PPGDPAGGGP GARGPLVPRS 60
PWQRLRARQR PAGPREPASA GGSGPAPAPA VSCHHHHPAPA PAAAPPAQNS GCPAAGRPP120
ASRHLGPGP QTAPGRPPPP GRGRPRSHCL HGR                                     153
```

(2) INFORMATION ON SEQ ID NO. 533:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 221 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 533:

```
YDQALHLHV  GQQP PRRFP G LCTQRAHGRH WELILHQKLF ISESEDVGDG GRLVVQAEAG 60
EQQE QGRWCG TPLL PRAVAE ALSRLAHRVD EAHDEALTD T LTAELTPEVG LVGEGHLFGG120
EKVHCCQ RGL NVAQDGAGHI GQQLGQARAL LP SHARCCQR LADVCQAAQE GRPETLQVVA180
QALAGHSFHD LRGSVCEPGS GQQGPGSPQA PVEAVQRPHQ Q 221
```

(2) INFORMATION ON SEQ ID NO. 534:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 52 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 534:

```
PSILIPMT PG GFFSVMVRAK TGSTHRCSPA VYPLMRRI PC WRILIGRQET TG
```

52

(2) INFORMATION ON SEQ ID NO. 535:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 38 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 535:

AGKKPPASHH KESGCPSRPS PTGHSTPPSD PLTDNSVW

38

(2) INFORMATION ON SEQ ID NO. 536:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 55 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 536:

SGCVPSHEED SMLEDHRQA RNHRLVIIRN PVVHLGQAPL ATPHRPQIRS LTIQS

55

(2) INFORMATION ON SEQ ID NO. 537:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 537:

TRGPRKRLRR SGRRGGLRSW AGRERVLGTA LLGIYIVFPR IPGSGSEEAV TPYDRRLDS 60
 RNSPQAPAGQ STTSSSFCFC DGLESRGLKH TVSIDCIRFV QKPGQLTESH FLA 113

(2) INFORMATION ON SEQ ID NO. 538:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 538:

EPADSQARGR QCLLLLHQVQ GIWLKACIFP GHKLPEPLKW EARQFQTNLF STHHSTFKVC 60
 LLLLPVHPPS LQFFHSLTSE RVPGGSMVNK LTCMLQKKKK K 101

(2) INFORMATION ON SEQ ID NO. 539:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 198 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 539:

YSLCSQCVSA PLTLNRHRSR RKRKWWIAQL EPGDCYDCLD LCGHRASQPP QTLSLECGGT 60
 QCRFPGGLSP RPSPCPPSSS GLLFYRFFLV SFLGLLFTEG TAALGFLVTS ALLGSDGSAS120
 ASWDLGGMGT MASTQMSWK M APRKSPYRSR FSRKVGSGTS GGEKSRSEAM AQVACCLTSL180
 LTHHSLEPTP APPRRSPR 198

(2) INFORMATION ON SEQ ID NO. 540:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 540:

```
KKNSSALIFL EEAADFGCQI SLRNGHFLRC FFLTESVDKL IKRLSHFKIT PKSSSTVFFF 60
FSFCFKITNQ VRSPTSSSMN SFVTELLSVC SPHCALNTVS AAPVCPLFRK ESIFNTFTIC120
TPWNLHMLTS YYKPTHPLS SGTGHPL 147
```

(2) INFORMATION ON SEQ ID NO. 541:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 138 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 541:

```
KNDRFPWTSI PGLK GALIKL FTEHVAEKHI YGLMPLLLEA QSTPFQVTPS TMANIVKGLY 60
TLRPEWVQMA PTLFSKFIPN ILPPAVESEL SEYAAQDQKF QRELIQNGFT RGDQSRKRAG120
DELAYNSSSA CASSRGYR 138
```

(2) INFORMATION ON SEQ ID NO. 542:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 179 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 542:

KACIPSDQSG FRWLQLYFLN LFQTFSLRRW NLNFLNMLLK IRNFKENLYR MVLQGVTSPP 60
 RELGMSWLII ARQHVVQVPGG TDSECIYAF LPEKRTHWSC RDCIQSTVGA AHTQELCHKA120
 VHGRGOWTST LVCNFKTKTK KKKNSAARLG GDFEMGQSTW EFTYRCEEN ASQAVTISK 179

(2) INFORMATION ON SEQ ID NO. 543:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 92 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 543:

IQFLEAAFAV FLHCMRFGNE CRNLLWAFTF LCQFGFYCLN LMLTWRGDGG QCCCGASSES60
 VCGELCCADV AVGGQVRGSA PSWKKSCLRV YV 92

(2) INFORMATION ON SEQ ID NO. 544:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 99 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 544:

KPNWHRKVNA HSKFLHSFPN RIQCKKTAKA ASRNCIYWPL PEQQAAMPAP WPPELDACCA60
 DVLTLMRMLG YGSDSEEIHL SYSSLERSSC VFNMKHFIW 99

(2) INFORMATION ON SEQ ID NO. 545:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 545:

QSQNTKVEFP IRIYTDPLTK VLLIMQFASS PSSWLGSSPI WHDHIKRTPS DMISSKKVPS60
 LLPDHQRPHQ HNTTLRIQIH CWP HNSTVPH LLSRSA 96

(2) INFORMATION ON SEQ ID NO. 546:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 546:

GRDAGQSEPW LSTSGCCAWG GCAPGARGCW GPGPPSLGVG RKP GCRVSAS SVPERWIAWS 60
 PRPSEASATF RGAPKSILTA RLWASAWRPQ HRGSQNERPW SSSMKTSG 108

(2) INFORMATION ON SEQ ID NO. 547:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 117 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 547:

PGRRAKRAMA VYVGMLRLGR LCAGSSGVLG ARAALSRWQ EARLQGVRFI SSREVDMMVS 60
TPIGGLSYVQ GCTKKHLNSK TVGQCLETTA QRVPEREALV VLHEDVRLTF AQLKEEW 117

(2) INFORMATION ON SEQ ID NO. 548:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 117 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 548:

PLLLELGKGQ PDVFMEDDQG LSFWDPLCCG LQALAHSLAV KMLFGAPLNV AEASDGRGDH 60
AIHLSGTEEA DTLQPGFLPT PREGGPGPQH PRAPGAQPPQ AQHPDVDSHG SLCPASR 117

(2) INFORMATION ON SEQ ID NO. 549:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 68 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 549:

RLSGPAANPR GAAGWRAAGA QELGMSYKPM RPWLPSSTPW SARHPLGPGA PRFPDREACA60
CAVRGCSV 68

(2) INFORMATION ON SEQ ID NO. 550:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 68 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 550:

GHCSPARRTR TPPCQGTGVP RAPGGAWQTR GCCWAARGAW VCRTSPTPGR QRHASRPLL60
 GWLRGRSA 68

(2) INFORMATION ON SEQ ID NO. 551:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 68 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 551:

DTAAPHGARA RLPVREPGCP GPQGVPRPG GAAGQPGAHG FVGHPQLLGA SGTPAGRSSG60
 VGCGAAQP 68

(2) INFORMATION ON SEQ ID NO. 552:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 32 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 552:

SPISITETQQ FSNLIHTIT CLLRMALYLF SL

32

(2) INFORMATION ON SEQ ID NO. 553:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 33 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 553:

ITLQPISQNM FLLNNTQLF YLCVLFMPDH QYQ

33

(2) INFORMATION ON SEQ ID NO. 554:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 43 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 554:

SFYFGWSHYN ENKYNAILNR QVMVCIKLLL NCCVSVIDIG DQA

43

(2) INFORMATION ON SEQ ID NO. 555:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 85 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 555:

CFTHWNVFFR LWMTSFLMER VQEGWKTPGF KLSIPHMFGS IIFRPEAARP EVRLHLSALF60
VLLLATLGFL LGTMCGCGMC EQKGG 85

(2) INFORMATION ON SEQ ID NO. 556:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 106 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 556:

FNDGKTWQLK KTLVTNGGFL LFFPHPPFCS HMPQPHMVPS RNPKVARSSST KRADKCRRTS 60
GRAASGLKMI EKPMWGMLSL NPGVFHPSWT LSIRKEVIHN RGKTFQ 106

(2) INFORMATION ON SEQ ID NO. 557:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 109 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 557:

NINYIEIIFL FLLISPLGP HRLSPAQLAQ LAQLAHSPQV SRRHRALTMV GWHGVSNNAN 60
SSHHPHPS SQRPLVVGPA VFQKGLTCTN LRQTYAPFSV SLASPSWED 109

(2) INFORMATION ON SEQ ID NO. 558:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 558:

LGIFVAYRNQ LGVPSLMRCS WKAIYARGGF TFAVPPFIDP SAFKKLECEN

50

(2) INFORMATION ON SEQ ID NO. 559:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 44 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 559:

FRLPFLTWHF CSLQEPWCT FSYEMQLESH LCKRWFHFCR SSIH

44

(2) INFORMATION ON SEQ ID NO. 560:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 45 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 560:

RVNEWRSDKS ETTSCINGFP AASHKRRYTK LVPVSYKNAK LRMGV

45

(2) INFORMATION ON SEQ ID NO. 561:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 34 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 561:

MRSRLPCEGL VARHPRELRV PSVREWIDWP WVLT

34

(2) INFORMATION ON SEQ ID NO. 562:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 67 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 562:

VSTHGQSIQK RTEGTRSSRG CRATSPSHGN RLLIQESFPQ NPPRARFQGH PLGRQSRQQP60
FTEAMSQ 67

(2) INFORMATION ON SEQ ID NO. 563:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 563:

APMASQSRSA LRARVAHAGA VPPALHTAID SSFRNHFLKT HQGLGSKGTR 50

(2) INFORMATION ON SEQ ID NO. 564:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 54 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 564:

YSIIFEQFFK CKSVSYSECV SEVIKDISQR YWPISLCNQR NSVSRLLLCV ICGS 54

(2) INFORMATION ON SEQ ID NO. 565:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 57 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 565:

CTMVNVDNTV SFLSSFLNVN LYLTQSVCLK LLRTFPNVTG PFPFVIRGIL FQDYCCV 57

(2) INFORMATION ON SEQ ID NO. 566:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 49 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 566:

EKCQPHSLIL LWPFFNFIK SHRSHTTIIL KQSSDYK GK WASNVGKCP

49

(2) INFORMATION ON SEQ ID NO. 567:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 567:

GEGRVWNPEG SKSRHWPDHP APWAPSPRQE QLFSIPSQTS SIFITMTFRE VSQASSRCPT60
IPSGGKRQEN SPRVPVMLLS PSQFRLSRTS YLQP 94

(2) INFORMATION ON SEQ ID NO. 568:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 89 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 568:

GLTLKKGTFF RGPEIQADPN LTPCSRTQAH RPLNSNPTSP PPPPTPDFLI SWNAFQDWKS60
PQGSSEPILS PARISSMHPG HAFHISRNK 89

(2) INFORMATION ON SEQ ID NO. 569:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 89 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 569:

DVLDLNLWDG ESSMTGTRGE FSCLEFPPEGI VGHLELAWET SLKVIVIKIE LVWEGMENS60
SCLGLGAQGA GWSGQCLDLL PSGFHTRPS 89

(2) INFORMATION ON SEQ ID NO. 570:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 73 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 570:

KSIHSHVIGY FHDFKWFYEE TESSDDVEVL TLKKFKGDLA YRRQEYQVEF NIWCLKWALV60
 LSV MAYVNNS VPS 73

(2) INFORMATION ON SEQ ID NO. 571:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 40 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 571:

SADSQEIQRR PGLQTTRVSG RIQHMVLEVG SCFISYGICK

40

(2) INFORMATION ON SEQ ID NO. 572:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 60 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 572:

NKSPLQAPYV EGYLLSSV GQVSFEFLES QHFNITAF CFFIKPLEIMK IAYYRVSYAF60

(2) INFORMATION ON SEQ ID NO. 573:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 318 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 573:

GNLSLES LCN LYNWRYKNLG NLP HVQLLPE FSTANAGLLY DFQLINVEDF QGVGESEPNP 60
YFYQNLGEAE YVVALFMYMC LLGYPADKIS ILTTYNGQKH LIRDIINRRC GNNPLIGRPN120
KVTTVD RFQG QQNDYILLSL VRTRAVGHLR DVRRLVVAMS RARLGLYIFA RVSLFQNCFE180
LTPAFS QLTA RPLHLHIPT EPFPTTRKNG ERPSHEVQII KNMPQMANEV YNMYMH LIQT240
THHYHQ TLLQ LPPAMVEEGE EVQNQETELE TEE EAMTVQA DIIPSPTDTS CRQETPAFER300
ESRPGGEGAI ALGGLGCF 318

(2) INFORMATION ON SEQ ID NO. 574:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 67 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 574:

KTPKPPQRNC PFPTGAALTL KGWSFLTAAG VCWTGYDVSL NSHGLFFCFQ LCFLILNFLT60
 LFYHSRW 67

(2) INFORMATION ON SEQ ID NO. 575:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 155 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 575:

SLMIMMCSLY QMHVHVYKV CHLGHIFYYL YFMRWSLSIL SSSWERFCWN YMQMKGASCE 60
 LTESWSQFKT VLEEGYSGED IKSKSGSRHG HYQATDIPQM AHCPGSYQRK KNIVILLTLK120
 SINSCHLVWS SNQWIVSTSS IDDVANKMLL AIICC 155

(2) INFORMATION ON SEQ ID NO. 576:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 57 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 576:

DHLGFISTKM RTNHGVRKGS LEEHKNLKAL GGYHYIISYF HRSDLAKLCI LSLLTFI 57

(2) INFORMATION ON SEQ ID NO. 577:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 48 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 577:

CSF CCILCKKTAN R GKRTLQIKT ILVSFPQR

48

(2) INFORMATION ON SEQ ID NO. 578:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 48 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 578:

LYFFKTLKEK CVLFAASFVR RLPTEEKGLY KLRPSWFHFH KDENKSWC

48

(2) INFORMATION ON SEQ ID NO. 579:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 48 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 579:

GSFPNTMICS HLCGNETKMV LICKVLFPLL AVFLQRMQQK EHIFLSKF

48

(2) INFORMATION ON SEQ ID NO. 580:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 48 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 580:

HCRIQLGLSP LVGREKTTQV MRNFYSFQEL EEQLLIKFA LVTKYFYS

48

(2) INFORMATION ON SEQ ID NO. 581:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 59 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 581:

IMPRAPLYRI PLNCNYVLLK SQLVKEELMV SVFVGNTCNT AEFYKGFLW WAGKKPLKS 59

(2) INFORMATION ON SEQ ID NO. 582:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 44 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 582:

GTLRPRSSDV LPIYLCFTTC LLSLTPNIPT YFSNSACHKF AASP

44

(2) INFORMATION ON SEQ ID NO. 583:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 46 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 583:

NVDSCQTHSL ALIPPLLSSS DIVNNDKQLL CTECFMCCS HFIHMY

46

(2) INFORMATION ON SEQ ID NO. 584:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 41 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 584:

LYMCIKCEQH IKKHSVHSSC LSLLTISLLE RRGGIRARLC V

41

(2) INFORMATION ON SEQ ID NO. 588:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 112 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 588:

GKPLVLHATP LSRCLPLHP TRSLILRPSL HLDPSFHHY LQRCSYYAPV YRGCTMTVP 60
 SQSNYSSGPK VWLSRAPLPR RGRPFQALPG WNWCRSLGC IVRPGVGVAS LL 112

(2) INFORMATION ON SEQ ID NO. 589:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 76 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 589:

GRSREAPAGW PKSTKPPSAR ENPWFSMPHL SPGALCLFTP QEALSYVLLS IYRTPVSITI60
 SRDVAIMRPS TGGARR 76

(2) INFORMATION ON SEQ ID NO. 590:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 97 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 590:

AGLDQKEELR GVRQHQHQGV RYTRGSSDTS SSPEGLGMAC HAGAMERVKA KPWDPKSNLT60
AKAPSSSGTP CRRAHNSYIS GDSOGNWGPI DGEKDVG 97

(2) INFORMATION ON SEQ ID NO. 591:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 63 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 591:

NGARLTSQPQ LYQRNHFIQI SQHFQNTNV YGRVNIRSEN PLEEISVSMF IISAFRGLPV60
WAK 63

(2) INFORMATION ON SEQ ID NO. 592:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 592:

NGSFGTVGAV MSTWLHKNP YEIFTVKFNY TCVTADFGGR QGLGLPFYLS

50

(2) INFORMATION ON SEQ ID NO. 593:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 55 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 593:

AYLFIFLK GK NTFTFSSSPE AQTLLYLTS QLTPLCDHQC GVVRLKDDSG HMTSL

55

(2) INFORMATION ON SEQ ID NO. 594:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 41 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 594:

SGDVCTESHG GLSRVKEKEQ QELSLGRWRR GGIDQARPWP W

41

(2) INFORMATION ON SEQ ID NO. 595:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 47 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 595:

FKVGLWKGGDI VEGEAVLYT YKWYTPFIHG GQRSSDQVTY VQKVTVA

47

(2) INFORMATION ON SEQ ID NO. 596:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 44 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 596:

SVLTTSQRLS SHEKSIQPTR AKVLLDLFHP FSTSLSTLA APSP

44

(2) INFORMATION ON SEQ ID NO. 597:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1651 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 597:

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GAGCTGCCAA GCAGCCCACC TCCTGGGCTT CCCGAAGTGG CCCCAGATGC AACCTCCACT 60
GGCCTCCCTG ATACCCCCGC AGCTCCAGAA ACCAGCACCA ACTACCCAGT GGAGTGCACC 120
GAGGGGTCTG CAGGCCCCCA GTCTCTCCCC TTGCCTATTC TGGAGCCGGT CAAAAACCCC 180
TGCTCTGTCA AAGACCAGAC GCCACTCCAA CTTTCTGTAG AAGATACCAC CTCTCCAAAT 240
ACCAAGCCGT GCCCACCTAC TCCCACCACC CCAGAAACAT GGGGGGGGGG GGGGGGGGGG 300
GCGCCGTCAT CTACTCCTTG TTCAGCTCAC CTGACCCCCT CCTCCCTGTT CCCTTCCTCC 360
CTGGAATCAT CATCGGAACA GAAATTCTAT AACTTTGTGA TCCTCCACGC CAGGGCAGAC 420
GAACACATCG CCCTGCGGGT TCGGGAGAAG CTGGAGGCCC TTGGCGTGCC CGACGGGGCC 480
ACTTTCTGCG AGGATTTCAT GGTGCCGGGG CGCGGGGAGC TGAGCTGCCT GCAGGACGCC 540
ATAGACCACT CAGCTTTCAT CATCCTACTT CTCACCTCCA ACTTCGACTG TCGCCTGAGC 600
CTGCACCAGG TGAACCAAGC CATGATGAGC AACCTCACGC GACAGGGGTC GCCAGACTGT 660
GTCATCCCCT TCCTGCCCCCT GGAGAGCTCC CCGGCCCAGC TCAGCTCCGA CACGGCCAGC 720
CTGCTCTCCG GGCTGGTGCG GCTGGACGAA CACTCCCAGA TCTTCGCCAG GAAGGTGGCC 780
AACACCTTCA AGCCCCACAG GCTTCAGGCC CGAAAGGCCA TGTGGAGGAA GGAACAGGAC 840
ACCCGAGCCC TCGGGGAACA GAGCCAACAC CTGGACGGTG AGCGGATGCA GCGGCGGCA 900
CTGAACGCAG CCTACTCAGC CTACCTCCAG AGCTACTTGT CCTACCAGGC ACAGATGGAG 960
CAGCTCCAGG TGGCTTTTGG GAGCCACATG TCATTGGGA CTGGGGCGCC CTATGGGGTC 1020
AGAATGCCCT TTGGGGGCCA GGGGCCCCTG GGAGCCCCGC CACCCTTTCC CACTTGCCCG 1080
GGGTGCCCCG AGCCGCCACC CCTGCACGCA TGGCAGGCTG GCACCCCCC ACCGCCCTCC 1140
CCACAGCCAG CAGCCTTTCC ACAGTCACTG CCCTTCCC GCACCCCCC CTTCCCTACG 1200
GCCTCACCCG CACCCCTCA GAGCCAGGG CTGCAACCCC TCATTATCCA CCACGCACAG 1260
ATGGTACAGC TGGGGCTGAA CAACCACATG TGAACCGA GAGGGTCCCA GCGCCCGAG 1320
GACAAGACGC AGGAGGCAGA ATGACCGCGT GTCCTTGCTT GACCACCTGG GGAACACCCC 1380
TGGACCCAGG CATCGGCCAG GACCCCATAG AGCACCCCG TCTGCCCTGT GCCCTGTGGA 1440
CAGTGGAAGA TGAGGTCATC TGCCACTTTC AGGACATTGT CCGGGAGCCC TTCATTTAGG 1500
ACAAAACGGG CGCGATGATG CCCTGGCTTT CAGGGTGGTC AGAACTGGAT ACGGTGTTTA 1560
CAATTCCAAT CTCTCTATTT CTGGGTGAAG GGTCTTGGTG GTGGGGGTAT TGCTACGGTC 1620
TTTTAATTAT AATAAATATT TATTGAATGC T

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1651

(2) INFORMATION ON SEQ ID NO. 598:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3304 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 598:

AAACCCCTCTT GGCTGTCTGC TGTCCAGGGA GTCGCCACTC CCTTCATTAT AGCCTTGCTC 60
 AGAGTGCAGC GGCAGGCCTG GGGATGGCCT CGGGAGAGGG ACCACAGAGC ACCAGCCTGC 120
 ATGGAACCTC CTTCTCACT CAGCTTCCCA CGTTGCCAGC TGGGACAGGG GAGATGGAGT 180

AATTTTGCTG TGGAAAGACT TCACGTCTTG CCGAATGAAA GTCCCGCCTG TCTGTCACGC 240
 TGATGCCCGT GCAGCTGTCT GAGCACCCTG AATGGAATGA GTCTATGCAC TCCCTCCGGA 300
 TCACTGTGGG GGGCCTTCTT GTGCTGGCGT CCATGACCAA GGCCGCGGAC CCCCCTTCC 360
 GCCCCGCTG GAAGGTGATC CTGACGTTCT TTGTGGGTGC TGCCATCCTC TGGCTGCTCT 420
 GCTCCACCG CCGGCCCCCC GGCAGGCCCC CCACCCACAA TGCACACAAC TGGAGGCTCG 480
 GCCAGGCGCC CGCCAACTGG TACAATGACA CCTACCCCTT GTCTCCCCCA CAAAGGACAC 540
 CGGCTGGGAT TCGGTATCGA ATCGCAGTTA TCGCAGACCT GGACACAGAG CCAACCGCCC 600
 AAGACGAAAA CACCTGGCGC AGCGACCTGA AAAAGGGCTA CCTGACCCTG TCAGACAGTG 660
 GGGACAAGGT GGCCGTGGAA TGGGACAAAG ACCATGGGGT CCTGGAGTCC CACCTGGCGG 720
 AGAAGGGGAG AGGCATGGAG CTATCCGACC TGATTGTTTT CAATGGGAAA CTCTACTCCG 780
 TGGATGACCG GACGGGGGTC GTCTACCAGA TCGAAGGCAG CAAAGCCGTG CCCTGGGTGA 840
 TTCTGTCCGA CGGCGACGGC ACCGTGGAGA AAGGCTTCAA GGCCGAATGG CTGGCAGTGA 900
 AGGACGAGCG TCTGTACGTG GCGCGCCTGG GCAAGGAGTG GACGACCACT ACGGGTGATG 960
 TGGTGAACGA GAACCCGGAG TGGGTGAAGG TGGTGGGCTA CAAGGGCAGC GTGGACCACG 1020
 AGAACTGGGT GTCCAACCTAC AACGCCCTGC GGGCTGCTGC CGGCATCCAG CCGCCAGCTA 1080
 ACCTCATCCA TGAGTCTGCC TGCTGGAGTG ACACGCTGCA GCGCTGGTTC TTCCTGCCGC 1140
 GCCGCGCCAG CCAGGAGCGC TACAGCGAGA AGGACGACGA GCGCAAGGGC GCCAACCTGC 1200
 TGCTGAGCGC CTCCCCTGAC TTCGGCGACA TCGCTGTGAG CCACGTCGGG GCGGTGGTCC 1260
 CCACTCACGG CTTCTCGTCC TTCAAGTTCA TCCCCAACAC CGACGACCAG ATCATTGTGG 1320
 CCTCAAATC CGAGGAGGAC AGCGGCAGAG TCGCCTCCTA CATCATGGCC TTCACGCTGG 1380
 ACGGGCGCTT CTGTTGCCG GAGACCAAGA TCGGAAGCGT GAAATACGAA GGCATCGAGT 1440
 TCATTTAACT CAAAACGGAA ACACCTGAGC AGGCCATCAG GACTCAGCTT TTATAAAAAC 1500
 AAGACGAGTG CACTTTTGTT TTGTTTGTT CTTTGTGAA CTGTGCCTGG GTTGAGGTC 1560
 TGGAGAGGGA GCCAGTCCC GGGCCCCATA GTGGTGCGGG CACTGGACCC CCGGGCCCCA 1620
 CGGAGGCCGC GGTCTGAACT GCTTTCCATG CTGCCATCTG GTGGTGATTT CGGTCACTTC 1680
 AGGCATTGAC TCAAGGCCTG CCTAACTGGC TGGGTGTTTT CTTCCATCCG ACCTCGTTTC 1740
 TTTTCTTTCC TATGTTCTTT TGTTCACTGA ATATCCCTAG AGCTCCTACC ATATGTCAGG 1800
 CCTATGCCT CACCCTGAGA ACGCAGTGAG CATGAGGTGG ACCTGTTTGC TGGGAACCCC 1860
 AGGTCACCCC CTTTCTTCC CAAACTTGGT GCCTTGGAAG AATCAGGTCC AGCCCTGAAG 1920
 ATCCTTGGGG AAGAAAATGT TTATGTTGCA GGGTATTGCA TGGTCACGAG TGAGGGGCGA 1980
 GCCCTGGGG GACACATCTG CCCACAGCTG CACAGGCCAG GGGCACAGGC ACATCTGTTG 2040
 GTTCTCAGGC CTCAGATAAA ACCATCTCCG CATCATATGG CCAGTGACCG CTTTCTCCCT 2100
 TCAAGAAAAT TCTGTGGCTG TGCAGTACTT TGAAGTTTTA ATTATTAACC TGCTTTAATT 2160
 AAAGCAGTTT CTTTCTTAT AAAGTGAAT CACCAAATCT TATCACACAG AGCACAGTCC 2220
 TGATGTTACC CAGCCCGCTC CAGCAGTGCG GGAGATTGTA AGGAAGCGGT GCGGCTGGT 2280
 GAAGCAAGTC TCACATGTCG GCGTTCTTGG CCAATGGATA CAAAGATAAA GAAAATGTTG 2340
 CCTTTTCTA GGAAGTGTCA GAAATCCTCA TGCCTTTCAA GACTTCTGTG AATGACTTGA 2400
 ATTTTATAT CCCTGCCTAG GGTCTGTGAA CGAGGCCTGT CTCTTCCCTG GGGTTTCTTT 2460
 CCATGGCCTT TATTTCTCCT CTTCCAGTGG GAGTTTGTCA GGCTCTTCTC TGTGGAACT 2520
 TCACGAGCGT TGGCTGGGCC TCGGCTTCCG TGGAGTGTAC TCCAGGGTGA AGGCAGAGTG 2580
 GGATTTGAGA CCCAGGTTAG GCACGACCCA GGCTGAGAAG GGACGTTTCC ATCATTACA 2640
 GTGCCCTCCC CACAGCAACT ACCTCACCCC GACCCCCACC CTCCTCCTA CCCCACCCG 2700
 CGATCGTCAG GGGTGCCACG GTGGGCCGGA GGGTGCCGGC TCTGGCTGTC CCTGTGCCG 2760
 TCCCTACAA ACCTCTCCCC CTTTGAAACT CAAGCACAGC TGCGAGGAGG GCAGCGAGGA 2820
 GGGACCCCTC TCTCATGGTT GTCTCTTTCC CCCGCTATGT CATAGGTAGT GGAGGAAGCG 2880
 AAGGAAGTGA ACGCTGAATG TGACGCATTT CTGAAGAGCT CAGCTGTCAC CGGGCATAGC 2940
 CTGGAAGCCC CAAGTCTGTT CTGACTTTGC CTGGCTGTCT CTTGACCCG CCTCCTAGAT 3000
 CATGTCTCTT GATGTCCAGG CTGGGTCAAT TAAATAGAG ATGCAATCAG GAAGGTTGGG 3060
 GGACTTGGGA CTGTGGCTGA ATTGAGACCT TGCTGATGTA TTCATGTCAG CACCTGAGTC 3120
 ACAGCCCAGG TGCCCGGAAG CAGCCTCTTC GCATAGGCAG TGATTTGCGA TTACTTTAAA 3180
 GCTCACCTTT TTTCTTCCCC TCTCTGTTCC CTGCTGTCAG CATAATGATT GTGTTCTTCC 3240
 CCTATGGGAT CCATCTGTTT TGTAACAAT AAAGCGTCTG AGGGAGTGTA AAAACAGAT 3300
 GGAT

(2) INFORMATION ON SEQ ID NO. 599:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 878 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 599:

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GCGGCCGCGC CAGTCTCGCT TCATGACGCA GCCGGTGACC TTCGACGAGA TCCAGGAGGT 60
GGAGGAGGAG GGGGTGTCCC CCATGGAGGA GGAGAAGGCC AAGAAGTCGT TCCTGCAGAG120
CCTGGAGTGC CTGCGCCGCA GCACGCAGAG CCTGTCGCTG CAGCGGGAGC AGCTCAGCAG180
CTGCAAACCTG AGGAACAGCC TGGACTCCAG CGACTCCGAC TCGGCCCTGT AAGGGGCGCC240
GCCC GCGGGG GGGACGCGCG CGTCCGCGGT CCGCGCGGGG ACCGGCGTGT GAACCCCGAG300
AGTGCCCGCG CCCTGCTCCC GGGGGACCCG CAAGGACCCG GGACCGCCGC TCCTCGCGCG360
CTCGGACTCC CGCCCCGCTG CGAACCGGTC GGTGCGCCCC TCGCCGCGCT CGCCCTGGCC420
CGGGAGCGCC GGGAGCGGGG CCGCTTTCCT CGTCCTTGTA AATGTTTATT TTTAACTCT480
TCCCAGTGCG AACTCTGCTG TGAGTGTGTG CGGGGAGGCG CGCCCGCGCT GAGTCGGCGG540
CGGGTAGCCA CTCCATGCCC TTGTCCGATG GTTTGCAACT CCGATTTTGC ACACCGCTCC600
ACCGTGCCCC CCAGCGCACA CCCATTCACT CTCACGCCAA CACTCTCGCT GAACACTTTT660
ATAATTGTTA GCGGTGGCCG TTGGGACTTT GGGCGCAGCG CGGCTGCTAC TCGCTCTGGA720
GGATTGATAT TTATTTTTCG ATTGCGATGG CTGAAGGCAT TTATTTAACG ATCTTTTAC780
CTGGATATGT CTGTGAGGCT CCTGAAAGGA GACAAATAAA GTCAATATAT TTGCACAGTG840
CAAAAAAAAA AAAGAAAGAA AAGAGAAGGT TCGAGAAA

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878

(2) INFORMATION ON SEQ ID NO. 600:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2760 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 600:

CACCCAACCT	GTGTTGTTGC	CGCCCGGCC	TTNCTCCAC	AGNTCTNCTT	NCTNCCGCCC	60
GGCACTTCTG	TGGACCCCTT	NTTAGTTCAC	AGGCACGGNT	GGGGCCGGTC	TGTGCTGGCG	120
NCTGCTGGCC	ACTGAGGGAC	AGGGACACGT	GCCACCTGCT	CATCTCTGCC	CTGAGGTCAC	180
CCCGTGGTCC	CTCCACGTGC	CCATCTCTCT	GCAGTGCCCT	CCTCGCCTGT	GCAGCCCGCC	240
CACCCACAGG	CTCACCCCTC	CTGCCGGCTG	CCAGAGGCCC	CCTCCAGCAG	GGCCTCTCTC	300
CGTNGCCCCA	GCTTCACTCT	CTCCCTCAGC	ACCTGCCCTG	CTGGAGGCCC	CAGCCCTCCG	360
TGGACAGCAG	GGGCCACGTG	GAGCCCGGGC	CGCTCACCCG	CCACCCAGTG	CTGGCCGCCT	420
TCTTGGTGCC	AAACCCCTT	CCCCACCCA	GAGACTGGGC	AGCTGTGTCT	GGTTCGTTCT	480
TTGACTAAC	CACATTTGTC	ATCTTAGGG	CAGGCTGGGG	CTGCGGGCTG	AGGGGGACCG	540
CTGGCACCCC	CCTTCCCTCC	CTTCTTGTT	CCATTTCCAT	CCATGACAGG	TACAGCATCC	600
CAGGAGCCCC	GCCTGAGGGG	CTGGACCCGA	GCCGGCTGTG	AACATCCCTC	AGCCCTGCTT	660
GTCCCCCTT	GGGACTAACC	ACTAACCTCA	CCCCAAACT	CCACGGGTGC	CCCTAGCTGG	720
CCCAGAGCCG	GCAGTGTGAG	CCCAAGTCCG	GGCTGGAGCC	GAGGCCGGAG	CAGCTGTCTG	780
GGAGTCAAGG	CTGCAGTAGC	GTTTCTTCAT	GGGGTGCTCC	AGGGGGTGCC	ACAGACCGAC	840
AGGCAGCCCA	AGGGCCTGGA	CACCCCTCCC	CAGGCAGGTG	CTGCCCCAGG	AGGACTGTCC	900
TCGGGAATGA	ACCTCCCGCG	GGCTTTGGAC	TGAGGTCCCT	GTGGCCTCGG	TCTCCTCCCC	960
ATGAAGTGGG	AGCGAGGCTC	CCCAATGGTG	CTTTTGGCTT	TAGTGTACGA	TGTTTGCTGT	1020
GCTTCCCGCC	GTGGAGGGCA	GAGCCACCCC	ACATCAGGAT	CGGACGTGCT	ACCCCTCCCC	1080
GTCCCGGCCC	TGGCCAGCCG	AGCCCAGCCC	TCGAGGCTCG	ATGCCTGTGC	CAAGGCCAGG	1140
GGCAGCCAGA	GGGCAGCTGG	ATGGCCACGT	GCAGGGGTCA	AGGCTGGGCC	CTGCAGTGGG	1200
GCGGGCCGCC	AGCCCCAGCA	GTTTACAGAC	GCATGGCTCT	TCCTCCAGA	GCAGCCGGCA	1260
GCTACCTGGA	CCGGAATGT	CCTCATCCCC	TCCCTGGGGC	CAGGCTCTGC	CCTGGCCTTC	1320
CTCTGTGAAC	CCCTCCTTTC	TTTGTGCTGG	TGTCTGGGAC	CAAAAAGGGG	GAATATGGGA	1380
GGGCAGAGTG	GGGAGGGGAG	TCCATGGGCC	TGGGGCCCCA	AGCCGGGGCG	TCTGAGCTCC	1440
CCAGGCATGA	CCAAACCTCA	GTGGAGGGGC	CTCTGCTTCA	GGCCCCGCCT	GGCTGACATT	1500
CTGAGCCCCC	CTCGGAGGCC	CCGCCACAGC	CAACCTGCCC	AGTCTTTTCT	CTGGGCTTGA	1560
CCCGCCAGGG	GAGTTCTCCA	GGCCTAGGGC	CAGGAGAGAG	GCCCTGGCAC	CCTGGCGTGG	1620
GTGGCCGCCA	AACGCCCTGC	GACCGCTACA	GAAGCACAAA	TGCTGTCCAT	GGCCGTGAGG	1680
CTGCCTGCCA	GGTGAATGGA	CATAGCGTGA	GAGGCGGTGA	GGCCAGGGCT	TCCAGCCTCG	1740
TGCTGTCTCG	GGACTCCTGA	CCGTGGTGTG	CGTGTGTGCC	CGTCTGTGAC	TTTCTACTCA	1800
CCAAGTTTGA	AGAAAGGAAA	CGGGGAAAAT	CAAAGGGGT	TCAAACCCCA	CCTCAGTAGG	1860
TGGAGGGGAG	CGCCTGCCAT	TGGTTGTATT	TTTGTCTGA	GTTTTTCGGT	CCGTGTTTCT	1920
AACTACTCCA	TCCCATGACC	TCGCCACACC	TACTGGGGCA	TCTGGCTGGT	GCCTGCTGCC	1980
ATGGCCAGCC	CCCACTTCTC	ACCCTGCACA	GGGGGTCTTG	CAGCCCCCAG	CCCCACAGCC	2040
TCGTTGGGAG	GACAGGGTGG	CCCTGGGGAC	AAGAGGGAGG	AGCCCAGGGG	CTTACCTCAC	2100
TGAGAGTGCT	CCCCAGCAGG	CATCCACTAC	CCCAGGGCCC	CCCACATGTC	ATGGCAAGGT	2160
TGGTAGTGAA	TGGGCCTGGT	TGGGAGCAGC	CCCTGGCCCC	TTGCCCCACC	ACCCATCTCA	2220
CTATGCAATT	CGAGTTCCAA	GCAACATTTG	CTCCTGCCCT	GGGGCCAGCT	CTGCCCCAGC	2280
CCTGAGAGGG	GTGGTGAGGC	AGCCCCCTGG	ACCCAGAAC	CCCAGACAAG	GGGGCAGGCG	2340
GGGGACCAGG	GCCTCTCCTG	TGGGATCTTT	GTTTTGTGTT	TAACCATAAT	GGTTGTGTAC	2400
TGAACCACTT	CATATTTGTT	ATATATAATA	TATATATATA	TAATCTCCTT	AAGACTCAGC	2460
CTCCTGGTTT	ACCCCCCGG	CCTGGGCATC	TGACCTCCCC	CACCCCAGTG	TGATTTAACA	2520
TCCAGGAAT	GAGGCCTGAA	CCATTTTGCA	TTTCCCCCTC	CTCCAGCCTC	TGTAGGGCCA	2580
TGGCTGTATG	TACTGTGCTG	GTGTTTTTTT	GTTTTTTTAG	AACTGGGTTT	GGGGGCTGAT	2640
TTTTATTTCT	TTGGGGGCTT	TTTTTCTTGG	CAAATACTAA	AAATCTCGTC	AATGTAATTT	2700
CTGTGGTTTC	TATTCAGCTT	GGGTTTCATG	TTTTAAATA	AATTTTAAAA	AGCAAAAAAA	2760

(2) INFORMATION ON SEQ ID NO. 601:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1021 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 601:

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GGCGGGGGCCG CGAGAGCAGT AGGTGTTAGC AGCTTGGTCG CGACAGGGGC GCTAGGTAGA 60
GCGCCGGGGAC CTGTGACAGG GCTGGTAGCA GCGCAGAGGA AAGGCGGCTT TTAGCCAGGT 120
ATTTCAAGTGT CTGTAGACAA GATGGAATCA TCTCCATTTA ATAGACGGCA ATGGACCTCA 180
CTATCATTGA GGGTAACAGC CAAAGAACTT TCTCTTGTC AACAAGACAA GTCATCGGCT 240
ATTGTGGAAA TATTCTCCAA GTACCAGAAA GCAGCTGAAG AAACAAACAT GGAGAAGAAG 300
AGAAGTAACA CCGAAAATCT CTCCCAGCAC TTTAGAAAGG GGACCCTGAC TGTGTTAAAG 360
AAGAAGTGGG AGAACCCAGG GCTGGGAGCA GAGTCTCACA CAGACTCTCT ACGGAACAGC 420
AGCACTGAGA TTAGGCACAG AGCAGACCAT CCTCCTGCTG AAGTGACAAG CCACGCTGCT 480
TCTGGAGCCA AAGCTGACCA AGAAGAACAA ATCCACCCCA GATCTAGACT CAGGTCACCT 540
CCTGAAGCCC TCGTTCAGGG TCGATATCCC CACATCAAGG ACGGTGAGGA TCTTAAAGAC 600
CACTCAACAG AAAGTAAAAA AATGGAAAAA TGTCTAGGAG AATCCAGGCA TGAAGTAGAA 660
AAATCAGAAA TCAGTGAAAA CACAGATGCT TCGGGCAAAA TAGAGAAATA TAATGTTCCG 720
CTGAACAGGC TTAAGATGAT GTTTGAGAAA GGTGAACCAA CTCAACTAA GATTCTCCGG 780
GCCCCAAGCC GAAGTGCAAG TGGAAGGAAG ATCTCTGAAA ACAGCTATTC TCTAGATGAC 840
CTGGAATAG GCCCAGGTCA GTTGTCTCT TCTACATTTG ACTCGGAGAA AAATGAGAGT 900
AGACGAAATC TGGAACCTCC ACGCCTCTCA GAAACCTCTA TAAAGGATCG AATGGCCAAG 960
TACCAGGCAG CTGTGTCCAA ACAAAGCAGC TCACCGACTA TACCAATGAG CTGAAGCCAG 1020
G
1021

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(2) INFORMATION ON SEQ ID NO. 602:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2889 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 602:

GATCAGGCCT	GTGGTCCAGC	TCACGTGCCAT	TGAGATTCTA	GCTTGGGGCT	TAAGAAATAT	60
GAAAACTTC	CAGATGGCTT	CTATCACATC	CCCCAGTCTT	GTTGTGGAGT	GTGGAGGAGA	120
AAGGGTGGA	TCGGTGGTGA	TCAAAAACCT	TAAGAAGACA	CCCAACTTTC	CAAGTTCTGT	180
TCTCTTCATG	AAAGTGTTC	TGCCCAAGGA	GGAATTGTAC	ATGCCCCCAC	TGGTGATCAA	240
GGTCATCGAG	CACAGGCAGT	TTGGGCGGAA	GCCTGTCTGC	GGCCAGTGCA	CCATCGAGCG	300
CCTGGACCGC	TTTCGCTGTG	ACCCTTATGC	AGGGAAAAGAG	GACATCGTCC	CACAGCTCAA	360
AGCCTCCCTG	CTGTCTGCCC	CACCATGCCG	GGACATCGTT	ATCGAAATGG	AAGACACCAA	420
ACCATTACTG	GCTTCTAAGC	TGACAGAAAA	GGAGGAAGAA	ATCGTGGACT	GGTGGAGTAA	480
ATTTGATGCT	TCCTCAGGGG	AACATGAAAA	ATGCGGACAG	TATATTGAGA	AAGGCTATTC	540
CAAGCTCAAG	ATATATAATT	GTGAAC TAGA	AAATGTAGCA	GAATTTGAGG	GCCTGACAGA	600
CTTCTCAGAT	ACGTTCAAGT	TGTACCGAGG	CAAGTCGGAT	GAAAATGAAG	ATCCTTCTGT	660
GGTTGGAGAG	TTTAAGGGCT	CCTTTCGGAT	CTACCCTCTG	CCGGATGACC	CCAGCGTGCC	720
AGCCCCCTCC	AGACAGTTTC	GGGAATTACC	TGACAGCGTC	CCACAGGAAT	GCACGGTTAG	780
GATTTACATT	GTTTCGAGGCT	TAGAGCTCCA	GCCCCAGGAC	AACAATGGCC	TGTGTGACCC	840
TTACATAAAA	ATAACACTGG	GCAAAAAAGT	CATTGAAGAC	CGAGATCACT	ACATTCCCAA	900
CACTCTCAAC	CCAGTCTTTG	GCAGGATGTA	CGAACTGAGC	TGCTACTTAC	CTCAAGAAAA	960
AGACCTGAAA	ATTTCTGTCT	ATGATTATGA	CACCTTTACC	CGGGATGAAA	AAGTAGGAGA	1020
AACAATTATT	GATCTGGAAA	ACCGATTCCCT	TTCCCGCTTT	GGGTCCCACT	GCGGCATACC	1080
AGAGGAGTAC	TGTGTTTCTG	GAGTCAATAC	CTGGCGAGAT	CAACTGAGAC	CAACACAGCT	1140
GCTTCAAAAT	GTGCGCAGAT	TCAAAGGCTT	CCCACAACCC	ATCCTTTCCG	AAGATGGGAG	1200
TAGAATCAGA	TATGGAGGAC	GAGACTACAG	CCTGGATGAA	TTTGAAGCCA	ACAAAATCCT	1260
GCACCAGCAC	CTCGGGGCCC	CTGAAGAGCG	GTTTGCTCTT	CACATCCTCA	GGACTCAGGG	1320
GCTGGTCCCT	GAGCACGTGG	AAACAAGGAC	TTTGACACAGC	ACCTTCCAGC	CCAACATTTCT	1380
CCAGGGAAAA	CTTCAGATGT	GGGTGGATGT	TTTCCCCAAG	AGTTTGGGGC	CACCAGGCCC	1440
TCCTTTCAAC	ATCACACCCC	GGAAAGCCAA	GAAATACTAC	CTGCGTGTGA	TCATCTGGAA	1500
CACCAAGGAC	GTTATCTTGG	ACGAGAAAAG	CATCACAGGA	GAGGAAATGA	GTGACATCTA	1560
CGTCAAAGGC	TGGATTCCTG	GCAATGAAGA	AAACAAACAG	AAAACAGATG	TCCATTACAG	1620
ATCTTTGGAT	GGTGAAGGGA	ATTTTAACTG	GCGATTTGTT	TTCCCGTTTG	ACTACCTTCC	1680
AGCCGAACAA	CTCTGTATCG	TTGCGAAAAA	AGAGCATTTT	TGGAGTATTG	ACCAAACGGA	1740
ATTTGGAATC	CCACCCAGGC	TGATCATTCA	GATATGGGAC	AATGACAAGT	TTTCTCTGGA	1800
TGACTACTTG	GGTTTCCTAG	AACTTGACTT	GCGTCACACG	ATCATTCCTG	CAAAATCACC	1860
AGAGAAATGC	AGGTGAGACA	TGATTCCGGA	CCTCAAAGCC	ATGAACCCCC	TTAAAGCCAA	1920
GACAGCCTCC	CTCTTTGAGC	AGAAGTCCAT	GAAAGGATGG	TGGCCATGCT	ACGCAGAGAA	1980
AGATGGCGCC	CGCGTAATGG	CTGGGAAAGT	GGAGATGACA	TTGGAAATCC	TCAACGAGAA	2040
GGAGGCCGAC	GAGAGGCCAG	CCGGGAAGGG	GCGGGACGAA	CCCAACATGA	ACCCCAAGCT	2100
GGACTTACCA	AATCGACCAG	AAACCTCCTT	CCTCTGGTTC	ACCAACCCAT	GCAAGACCAT	2160
GAAGTTTCATC	GTGTGGCGCC	GCTTTAAGTG	GGTCATCATC	GGCTTGCTGT	TCCTGCTTAT	2220
CCTGCTGCTC	TTCGTGGCCG	TGCTCCTCTA	CTCTTTGCCG	AACTATTGTG	CAATGAAGAT	2280
TGTAAAGCCA	AATGTGTAAC	AAAGGCAAAG	GCTTCATTTT	AAGAGTCATC	CAGCAATGAG	2340
AGAATCCTGC	CTCTGTAGAC	CAACATCCAG	TGTGATTTTG	TGTCTGAGAC	CACACCCAG	2400
TAGCAGGTTA	CGCCATGTCA	CCGAGCCCCA	TTGATTCCCCA	GAGGGTCTTA	GTCCTGGAAA	2460
GTCAGGCCAA	CAAGCAACGT	TTGCATCATG	TTATCTCTTA	AGTATTAAAA	GTTTTATTTT	2520
CTAAAGTTTA	AATCATGTTT	TTCAAAATAT	TTTTCAAGGT	GGCTGGTTCC	ATTTAAAAAT	2580
CATCTTTTTA	TATGTGTCTT	CGGTTCTAGA	CTTCAGCTTT	TGGAAATTGC	TAAATAGAAT	2640
TCAAAAATCT	CTGCATCCTG	AGGTGATATA	CTTCATATTT	GTAATCAACT	GAAAGAGCTG	2700
TGCATTATAA	AATCAGTTAG	AATAGTTAGA	ACAATTCTTA	TTTATGCCCC	CAACCATTCG	2760
TATATTTTGT	ATGGATGTCA	TAAAAGTCTA	TTTAACCTCT	GTAATGAAAC	TAAATAAAAA	2820
TGTTTACCTT	TTAAAACATA	GGGGGGGTGG	TCGGGGGGTC	GGGAGGGGGG	GGGGTGGTGT	2880
GGGGTGTGG						2889

(2) INFORMATION ON SEQ ID NO. 603:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3638 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 603:

AGAGTTTCAG TTTTGGCAGC AGCGTCCAGT GCCCTGCCAG TAGCTCCTAG AGAGGCAGGG 60
 GTTACCAACT GGCCAGCAGG CTGTGTCCCT GAAGTCAGAT CAACGGGAGA GAAGGAAGTG 120
 GCTAAACAT TGCACAGGAG AAGTCGGCCT GAGTGGTGCG GCGCTCGGA CCCACCAGCA 180
 ATGCTGCTCT TCGTGCTCAC CTGCCTGCTG GCGGTCTTCC CAGCCATCTC CACGAAGAGT 240
 CCCATATTTG GTCCCGAGGA GGTGAATAGT GTGGAAGGTA ACTCAGTGTC CATCACGTGC 300
 TACTACCCAC CCACCTCTGT CAACCGGCAC ACCCGGAAGT ACTGGTGCCG GCAGGGAGCT 360
 AGAGGTGGCT GCATAACCCT CATCTCCTCG GAGGGCTACG TCTCCAGCAA ATATGCAGGC 420
 AGGGCTAACC TCACCAACTT CCCGGAGAAC GGCACATTG TGGTGAACAT TGCCAGCTG 480
 AGCCAGGATG ACTCCGGGCG CTACAAGTGT GGCCTGGGCA TCAATAGCCG AGGCCTGTCC 540
 TTTGATGTCA GCCTGGAGGT CAGCCAGGGT CCTGGGCTCC TAAATGACAC TAAAGTCTAC 600
 ACAGTGGACC TGGGCAGAAC GGTGACCATC AACTGCCCTT TCAAGACTGA GAATGCTCAA 660
 AAGAGGAAGT CCTGTACAA GCAGATAGGC CTGTACCCTG TGCTGGTCAT CGACTCCAGT 720
 GGTTATGTGA ATCCCACTA TACAGGAAGA ATACGCCTTG ATATTGAGG TACTGGCCAA 780
 CGACTGTTCA GCGTTGTCTC CAACCACTC AGGCTCAGCG ATGCTGGGCA GTATCTCTGC 840
 CAGGCTGGGG ATGATTCCAA TAGTAATAAG AAGAATGCTG ACCTCCAAGT GCTAAAGCCC 900
 GAGCCCGAGC TGGTTTATGA AGACCTGAGG GGCTCAGTGA CCTTCCACTG TGCCCTGGGC 960
 CCTGAGGTGG CAAACGTGGC CAAATTTCTG TGCCGACAGA GCAGTGGGGA AAAGTGTGAC 1020
 GTGGTCGTCA ACACCCTGGG GAAGAGGGCC CCAGCCTTTG AGGGCAGGAT CCTGCTCAAC 1080
 CCCCAGGACA AGGATGGCTC ATTCACTGTG GTGATCACAG GCCTGAGGAA GGAGGATGCA 1140
 GGGCGCTACC TGTGTGGAGC CCATTCCGAT GGTCAGCTGC AGGAAGGCTC GCCTATCCAG 1200
 GCCTGGCAAC TCTTCGTCAA TGAGGAGTAT ACGATTCCCC GCAGCCCCAC TGTGGTGAAG 1260
 GGGGTGGCAG GAGGCTCTGT GCGCGTGCTC TGCCCCTACA ACCGTAAGGA AAGCAAAAGC 1320
 ATCAAGTACT GGTGTCTCTG GGAAGGGGCC CAGAATGGCC GCTGCCCCCT GCTGGTGGAC 1380
 AGCGAGGGGT GGGTTAAGGC CCAGTACGAG GGCCGCTCT CCCTGCTGGA GGAGCCAGGC 1440
 AACGGCACCT TCACTGTCTC CCTCAACCAG CTCACCAGCC GGGACGCCGG CTTCTACTGG 1500
 TGTCTGACCA ACGGCGATAC TCTCTGGAGG ACCACCGTGG AGATCAAGAT TATCGAAGGA 1560
 GAACCAAACC TCAAGGTACC AGGGAATGTC ACGGCTGTGC TGGGAGAGAC TCTCAAGGTC 1620
 CCCTGTCACT TTCCATGCAA ATTCTCCTCG TACGAGAAAT ACTGGTGCAA GTGGAATAAC 1680
 ACGGGCTGCC AGGCCCTGCC CAGCCAAGAC GAAGGCCCCA GCAAGGCCCT CGTGAAGTGT 1740
 GACGAGAACA GCCGGCTTGT CTCCTTGACC CTGAACCTGG TGACCAGGGC TGATGAGGGC 1800
 TGGTACTGGT GTGGAGTGA GAGGGGCCAC TTCTATGGAG AGACTGCAGC CGTCTATGTG 1860
 GCAGTTGAAG AGAGGAAGGC AGCGGGGTCC CGCGATGTCA GCCTAGCGAA GGCAGACGCT 1920
 GCTCCTGATG AGAAGGTGCT AGACTCTGGT TTTGCGGAGA TTGAGAACAA AGCCATTAG 1980
 GATCCCAGGC TTTTTCGAGA GGAAGAGGCG GTGGCAGATA CAAGAGATCA AGCCGATGGG 2040
 AGCAGAGCAT CTGTGGATT CCGCAGCTCT GAGGAACAAG GTGGAAGCTC CAGAGCGCTG 2100
 GTCTCCACCC TGGTGCCCT GGGCCTGGTG CTGGCAGTGG GAGCCGTGGC TGTGGGGGTG 2160
 GCCAGAGCCC GGCACAGGAA GAACGTCGAC CGAGTTTCAA TCAGAAGCTA CAGGACAGAC 2220
 ATTAGCATGT CAGACTTCGA GAACTCCAGG GAATTTGGAG CCAATGACAA CATGGGAGCC 2280
 TCTTCGATCA CTCAGGAGAC ATCCCTCGGA GGAAGGAAG AGTTTGTGTC CACCCTAGG 2340
 AGCACCACAG AGACCAAAGA ACCCAAGAAG GCAAAAAGGT CATCCAAGGA GGAAGCCGAG 2400
 ATGGCCTACA AAGACTTCCT GCTCCAGTCC AGCACCCTGG CCGCCGAGGC CCAGGACGGC 2460
 CCCCAGGAAG CCTAGACGGT GTCGCCGCCT GCTCCCTGCA CCCATGACAA TCACCTTCA 2520
 AATCATGTCT ATCCTGGGGC CCTCAGCTCC TGGGGACCCC ACTCCCTGCT CTAACACCTG 2580

CCTAGGTTTT TCCTACTGTC CTCAGAGGCG TGCTGGTCCC CTCCTCAGTG ACATCAAAGC 2640
 CTGGCCTAAT TGTTCCCTATT GGGGATGAGG GTGGCATGAG GAGGTCCCAC TTGCAACTTC 2700
 TTTCTGTTGA GAGAACCTCA GGTACGGAGA AGAATAGAGG TCCTCATGGG TCCCTTGAAG 2760
 GAAGAGGGAC CAGGGTGGGA GAGCTGATTG CAGAAAGGAG AGACGTGCAG CGCCCCTCTG 2820
 CACCCTTATC ATGGGATGTC AACAGAATTT TTTCCCTCCA CTCCATCCCT CCCTCCGCTC 2880
 CTTCCCTCT TCTTCTTTCC TTACCATCAA AAGATGTATT TGAATTCTA CTAGAATTCA 2940
 GGTGCTTTGC TAGATGCTGT GACAGGTATG CCACCAACAC TGCTCACAGC CTTTCTGAGG 3000
 ACACCAAGTGA AAGAAGCCAC AGCTCTTCTT GCGGTATTTA TACTCACTGA GTCTTAACCT 3060
 TTCACCAGGG GTGCTCACCT CTGCCCCTAT TGGGAGAGGT CATAAAATGT CTCGAGTCCT 3120
 AAGGCCTTAG GGGTCATGTA TGATGAGCAT ACACACAGGC ATGAGCCACT GAGCCTGGCC 3180
 CAGAAGCGTT TTTCTCAAAG GCCCTCAGTG AGATAAATTA GATTTGGCAT CTCCTGTCTC 3240
 GGGCCAGGGA TCTCTCTACA AGAGCCCCTG CCCCTCTGTT GGAGGCACAG TTTTAGAATA 3300
 AGGAGGAGGA GGGAGAAGGA AAAATGTAAA GGAGGGAGAT CTTTCCCAGG CCGCACCATT 3360
 TCTGTCACTC ACATGGACCC AAGATAAAAG AATGGCCAAA CCCTCACAA CCGTCACTGT 3420
 TGAAGAGTTC CAAGTTGAAG GGAAACAAAG AAGTGTGTTG TGGTGCCAGA GAGGGGCTGC 3480
 TCTCCAGAAA GCTAAAATTT AATTTCTTTT TTCCTCTGAG TTCTGTACTT CAACAGCCT 3540
 ACAAGCTGGC ACTTGCTAAC AAATCAGAAA TATGACAATT AATGATTAAA GACTGTGATT 3600
 GCCACCAAAA AAAAAAAAAA AGACGAAAAG AAAAAGGG 3638

(2) INFORMATION ON SEQ ID NO. 604:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2775 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 604:

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ATAGGTTTGG ACCTTTCTTG GTAGAATTAC TGCCCTAATT TTGTTCCACT GATACTAGAA 60
ACGGTCTGAT GTTAGAGCTG GAAGGGATCT GTAGTATCAC GCAGTCCGAT TCTCTAATTT 120
TCCACATGAG AAAATGAAGG TCCAGAGGAA GCAGAGACTT AACTCACAAA TCAGAAAAGC 180
GGTTCTTGCA GAACTGAGGC CATAGTGAGG ACTTTCTGCT TTCCACCATA CCACCTTGCC 240
AGTCCACACA AGAGGGAGGA TGTATTTTGG GGGGCATACA CTGAGGATGG AGAAAGATGG 300
CATCAGAACT GCTGGGTGAA GTGGTGGCTT AACTGGACTT TGACAGCTGC CTTTTGAAAA 360
CCCCAAAAC AAACACACTG CATGTAATCA AAAGATGCTT ATACTAATAA TGACCTGTGC 420
TGTTCCCACT CAGTTGCTCT CTGTTTTTCGA GAAGACATGA GAAGCTGCAA CATGACCTGG 480
AGTGGAACTG GAGAGTCACA TTTTGTGTTT AGCCACCTGC TGGGCAGCAC AGCGACTGCA 540
CCTTCCCAGA AGGCTGAAGT GTCGTGTGTC TGCACTCCAG TGGCATCTCT GCAGTGGTCA 600
GAGTGACCTG GTATAAGGGA GAGGGCATCA CCTTGCCCCC TGTGCTGACT CCTGCCCTTC 660
CCCTACAGGA GAGTCCATCC CGATCCGGCT CTTCTGGGCC GGGTATGAGC TCACGCCCAC 720
CATGCGGGAC ATCAACAAGA AGTTCTCTGT GCGCTATTAC CTCAACCTGG TGCTGATAGA 780
CGAGGAGGAG CGGCGCTACT TCAAGCAGCA GGAAGTGGTG TTGTGGCGGA AGGGTGACAT 840
CGTACGGAAG AGCATGTCCC ACCAGGCGGC CATCGCCTCA CAGCGCTTTG AGGGCACCAC 900

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CTCCTGGGT GAGGTGCGGA CCCCCAGCCA GCTGTCTGAC AACAACTGCA GGCAGTAGGC 960
 CCCCAGGGCC GAGAAGATGC TGGGCACCCA CCCAGCACCC CCATCTACCA ACACCAGCGG1020
 CTGGGGGCGG GGGCGGACCT TGTGAGGCTC AGTTGACCCG TTACTTGCAA CCTGAAAACA1080
 AATCATGTTT TTGACTTAAA TTCTTTTCTC TGGAGAACCC AAGGGGCTTG GGGTGGGAAG1140
 CAGTCTCTCC TTGGGATTCT GCGGCCGATG TGGGATAGAA GAGGTAGCAT CCTGGAAGCC1200
 AGCCTCTCTG GGGAAACATGA GCCCCCTTCC TCGGGGGGCT GCCTTGCGTC TTAGAGGAGG1260
 GAGAGCAGAG AGCACGCATC CTTGGCTCCT GGCTCTCTGA GCTTCCTGAT ACAGGATCTG1320
 AGCATGTCCC TGGGATTCTG AGCTGCCAAC AGGGCCCTGG GTAGTCACAT CTTGTACTCC1380
 CCTTTGCTGT CCCGGAGGTA GTGGCAGGAG TTGGGCCAGC CCCCATAAG TGGCAGGGGA1440
 AGACTCACGA TTGGGAAGCT ACCTCTTTGG GAATCTTGGA TGTGGTGATC TCAAGTTCCC1500
 ACAGGCCACC TCCTTCTGGC CACTCACTGC TGGGACCCAG GCACCTCCCT TCTCCATCCT1560
 CTCTGGATTG TCAGTAATGT CCTGGAACAG AAGCCTGTAG GATGGCCTTG GGCACGGAGA1620
 AGCCCTGGGG TCAGTGTCGT GCACGGATGG CGGCAGTGTT GAACCCAGGA GGCTGAACCC1680
 GGCCACCAC GGAAGATGAG TGCATGGCAA CCGCTGCCT TCACGTCGCT CCACTTGGTA1740
 ACCCAAGGT CTGGGCTGTT CTAGGTATTG CTTACGTGC CCCAGCAAGC CCTTAACAAG1800
 AGGGCTGGT TCCCTGAAGA ACCAATCCCA GGAAGGGGCC TTGATCCCTC CGCCTTGCTG1860
 AGAGTGAACC CTCGTCTCTC CTCACCCTCC ATTTCAATTC TGGGAATTGG GGCTTAGTTT1920
 CGAACCTTTG GCAAGGCTGT TCTTACTAAT GCCCAAGCCC CTTTACCCCT CTCCCTATAG1980
 GTTACACAGG GGAGACCAGG GCCTCGGCAG AAGACTGCTG CCACACTTCC GAATCATTCT2040
 GCTTGCCAAA TAGGTCATCT TCACCAAGTT ACTGACCCAA GTTTAGGACC ATTGGTATCG2100
 TGTGTTTAAA AAACACATAT AAAAAAATC TTGTGAATAT TCTTGTTATG CTAGAGAGGA2160
 AGGTACTTCT CCCTCTACGG CTCTGCGCTG GGGCCTATGG TAGTAAAGTT GTTTACTGTC2220
 CTTTTTCTGC TTCCCCTGGA AATGACAGGC ATTACTCTCC CATTGGCCTC CCTTCCCTTT2280
 ATAGAAAGC CAAGCAGGCC CCACTGGCCA AGAGGTACGG TATTGGCAG TCTGAGTTCT2340
 CAGTAATTTG GAAAGTTAAG GAGTTGGTTC CTGTGTCACC TTTCAAGTTAG TGTGGGAAAG2400
 GAAGACTTCT GTTTTCTGA GATCAGTGCA GTCTCAGGCC TTTGGCAGGG CTCATGGATC2460
 AGAGCTGAGA CTGGAGGGAG AGGCATTTCT GGTAGCCTAG GAGGGCGACT GGCGGCAGCA2520
 GAACCGAGGA AGGCAAGGTT GTTTCCCCCA CGCTGTGTCC TGTGTTTCAGG TGCGACACAC2580
 AATCCTCATG GGAACAGGAT CACCCATGCG CTGCCCTTGA TGATCAAGGT TGGGGCTTAA2640
 GTGGATAAGG GAGGCAAGTT CTGGGTTTCT TGCTTTTCA GAGCATGAGG TCAGGCTCTG2700
 TATCCCTCCT TTTCTAGCT GATATTCTAA CTAGAAGCAT TTGTCAAGTT CCCTGTGTGG2760
 CCCTTCCCCC CAGAG 2775

(2) INFORMATION ON SEQ ID NO. 605:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 944 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 605:

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GGGAGATGCC ACCGGGAAAT CCCCCAATGT CCACTAGGGG GCAGGAGGCC ACCGTTCTTC120
GTACTCCGGA GAACCTGGCT GGAGAGCTCT TTCTTGTTCA CCCTTCCCAC CAGACTAAAA180
GGTCATCGCA GATAACGTGA AGGACTGGAG CAAGGTCGTC CTGGCCTATG AGCCTGTGTG240
GGCCATTGGT ACTGGCAAGA CTGCAACACC CCAACAGGCC CAGGAAGTAC ACGAGAAGCT300
CCGAGGATGG CTGAAGTCCA ACGTCTCTGA TGCAGTGGCT CAGAGCACCC GTATCATTTA360
TGGAGGCTCT GTGACTGGGG CAACCTGCAA GGAGCTGGCC AGCCAGCCTG ATGTGGATGG420
CTTCCTTG TG GTGGTGCTT CCCTCAAGCC CGAATTCGTG GACATCATCA ATGCCAAACA480
ATGAGCCCCA TCCATCTTCC CTACCCTTCC TGCCAAGCCA GGGACTAAGC AGCCCAGAAG540
CCAGTAAGT GCCCTTTCCC TGCATATGCT TCTGATGGTG TCATCTGCTC CTTCTGTGG600
CCTCATCCAA ACTGTATCTT CCTTTACTGT TTATATCTTC ACCCTGTAAT GGTGGGACC660
AGGCCAATCC CTTCTCCACT TACTATAATG GTTGGAACTA AACGTCACCA AGGTGGCTTC720
TCCTTGGCTG AGAGATGGAA GGCGTGGTGG GATTTGCTCC TGGGTTCCCT AGGCCCTAGT780
GAGGGCAGAA GAGAAACCAT CCTCTCCCTT CTTACACCGT GAGGCCAAGA TCCCCTCAGA840
AGGCAGGAGT GCTGCCCTCT CCCATGGTGC CCGTGCCTCT GTGCTGTGTA TGTGAACCAC900
CCATGTGAGG GAATAAACCT GGCCTAGGA AAAAAAAAAA AAAA 944

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(2) INFORMATION ON SEQ ID NO. 606:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1939 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 606:

CCAGTCAAGA ATCTCCCACT AAGCTTCAAA GTAGTGGATT ACAGCATGGC AACCATGCCA 60
 GTAATTTGAA ATTTAGTAGA GAGGCTTTTCG CTTAGTAGAG ATGGGTTTTT GCAGGCTGCT 120
 CCCGAACCTC TGACCTCACC CCACCCGCGG CAACCCCCC ATCGGGCCCC CAAAGTGCTG 180
 GGGTTACAGG CTTAAGCCAC CAAGCCCGGC CGACCTTCTT CTATTTTCC ATTCTCCTT 240
 CCAAAGCCAT GGCCATGCGC TCCTGTGTAC AGGTGCATAA ACACATCAGT GTGCCATCCC 300
 TCACATGCAT GTCGTTCCCC ACCCTCCTT CCCAGGGCTT CTCTTGGCTC CAGCGTTCCT 360
 CTGGGACCCT CTGCAGATAC AGCCTGTGCT GGACCCCGAG CCAGGGTGAG GGCTCATTCT 420
 GCTCTGTCTT CCCCCTGCC TCAGTTTCCC CCAAAGCTG ETTTCACGTC CTTCTAGTAG 480
 GGGGCCTCCC ATGGGGGCAA GGATCCCCTT TAGGATTCAA TCTTTCCTCT TTGGGCAGTT 540
 TTGGCTTTGA GTCCCCCAGG GATCAGGGTG AGAATGAAGA AGAGCTCAGT GAGCGGAATG 600
 ACAGCAGCTG GGTGGGTGGT GTGGGGAGAG GCTGAGGGGA AGGCAGCTCT AAGACTGGGA 660
 GTGGAGTTCC TGGAGGTGTG GGGAGGGGGG CGTGTTTCA ATTTAGAAAA ATCTCAGCCA 720
 GCTCGAGCCG AGAGAGAATG CGAAAGAGGA AGTTCGGAAG GAGCGAGGAA TGGGGTGGT 780
 GGCAGCGGGG GCCGCTCAGT CGCTGTCGCT CTTGTCCACC AGCACGGCGT CCGACTCCTC 840
 GGTGATCTCC AGCAGCGCGT GCACGTCGGG GCTGCTCCCG CGCCGCAGGT CGCCGGCCTC 900
 CCCCCGCTCC GCGCCGCCCT CGTCGTCGTC GCGCCCCACC TCCACCATCT CGGTGGCCTT 960
 GAGCACTTCC ACCTGGCCCT CGCGGATCTT CTTGACGTGG AAGGTGAAGG GTGGCACCTT 1020
 GTAGACCGCG GTCTTGAGC GCGCGTACAC CACGTGGTCG GCGTGAAGG ATTTGCGCAA 1080
 CTTGTCCCGC GACGTCTTCA GTTTCTCGCG CCGCTCGGCG GGCACCAGGC GCGTGCCAG 1140
 CTTGTTCATG CGCTTCTCCA GGGTGTGCCG CGTCTTCTCC AGGTTTTCTT TGGTCTTGAG 1200
 GCGCGTCTTC TCCAGGTTCT CGCGGGTACG CACCTTGGTC TTCTCCATCT TCTCCTTGA 1260
 GAAGGCCTTC TTGAAGTCGT CCACGCGCCG CAGGCCCTGC GCTTGATACG CTCTGCGCGG 1320
 GACTCCTCAA TAACCTCCTC AACCTCCACC GCCTCGTCCG ACGAAAGCTC CAGCGCCGCT 1380
 GCGTCTCCT CGGGCCGCTC GCCCTCGCCC AGCTCCTCGC CCTCCTTCTC TGGCAGCGCC 1440
 TCCGACTCTT TCAGCGATTT GCTGATGCTC AGTTTGGCCG GCAGCTTCAC TTCATCCTGG 1500
 TAGATCATGA CTTTAAAGTT GCGGCGCCGC AGCAGCTCGG CCTCGTTGAC CTCAGCTTC 1560
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 TTGCGCACCT TCTCCAGCAG CTTGCTCACC GTATTGCTCG TGGTGGCGTG CGCCTTGCCC 1680
 AGCTTGCTCA GCTCGCCCTG GATGCTCTGC ACTGCGCCCT CCATCTCCGC CTGCCGCTCC 1740
 TCCAGCTGTG CTTGAGTCAG CTGGATCTGG TCTACGGCCC CGATGATTTT GTCCAGGAGG 1800
 CTCAGACCA GCACGCCGT CACCTGGTCC GACTTGATCA GCTCTTCTGA GCCGGCCCCC 1860
 GACGGCTCCT CCGCTGCCTG AGCCCCAGCG GAGGAAGCTC CGGGGCCTCG GCGATCGGGG 1920
 TACCÖGGGCA AGCGGCCCG 1939

(2) INFORMATION ON SEQ ID NO. 607:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1570 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 607:

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GGCACGAGGA AGTTAAGATC ATACATGCGG ATGTGCTGGT AACCTGCAAG AAGCAATCAT 60
GCTGCGGTCC GGTGTGACCT CCCAAGGCAT TCACCCTGGG AGTCCCTGGT GCTGCACCCC 120
AACCCAGGCA GAGCTCATCG TGGGTGACCA GAGCGGGGCT ATCCACATCT GGGACTTGAA 180
AACAGACCAC AACGAGCAGC TGATCCCTGA GCCCGAGGTC TCCATCACGT CCGCCCACAT 240
CGATCCCGAC GCCAGCTACA TGGCAGCTGT CAATAGCACC GGAAACTGCT ATGTCTGGAA 300
TCTGACGGGG GGCATTGGTG ACGAGGTGAC CCAGTCTATC CCCAAGACTA AGATCCCTGC 360
CCACACGCGC CGTACGCCCT GCAGTGTCGC TTCAGCCCCG ACTCCACGCT CCTCGCCACC 420
TGCTCGGCCT GATTAAGACG GTGCAAGATC TGAAGGACG TCCAACCTTC TCCCTGATGA 480
CGGAGCTGAA GCATCAAGAG CGGCAACCCC GGGGAAGTCC TCCGCGGGCT TGGATGTGGG 540
GGCCTGCGCT CTCATCGGGG GACTCCCAGT ACATCGTCAC TGCTTCCTCG GACAACCTGG 600
CCCGGCTCTG GTGTGTGGAG ACTGGAGAGA TCAAGAGAGA GTACGGCGGC CACCAGAAGG 660
CTGTTGTCTG CCTGGCCTTC AATGACAGTG TGCTGGGCTA GCCTGTGACC CCTCGGGACN 720
TGCCTGGTGC AGGTGGTGGC AGCNTGGAGG GACCCATGCA GCACCCAGGT CAGAGCAGAC 780
CCNTNCCCCT NGCCNGGCCT GCGCCANGCT GGNACCTGAT GGCCCCCTGT GGCGCCCTGA 840
CCTGCTGGGC CAGGCTGNCC CTGGGACTCT CAGCCCCCAN GTTGCTTATC CANGATGTGA 900
CAGAGCTCGA CCCAAGCCAG GCTGCACACT CCTGGACNTG GGCTAGCCTG CACTGCCNTG 960
GGAAAGNTCN GCCGAGGGCC CANAAGCTGC TGAGGGGTNC TGAGGCTGGT GCCCACCCTC 1020
AAGCTAGTGT GTTCTCTGCC CCTCCCTGCC CGCGTTTCAG GGCCTCGGTC CATAGAGAAC 1080
ACCACCACCA TGGCCAGGTG GAAGGGTTTA TTAGTCCCTG CCAGCAGCTG TCCTCCCTGG 1140
TGCAGGTGGC CTGGCCAGCC CACTGGATTG GGGACGGGCC AGGCTGGGCC AGGTCGGGGG 1200
CTCAGTCTGG GAGGTAATAA AAGCAGACCG ACACGCAGAT GTTGCTCGGG AAAAAAAAAA 1260
AAAAAAAAAA AAAAAAAGC CGCTGTCTCC GGGGCCCCCTC TGCTCGCCGG GCCCAGTAGA 1320
TGGGGGTCTT CATGCACAGG CGCTGCACCA AAGCCCCCGC CTGGGCGGTA GCCACTTACG 1380
AGGCTCCCCC GCACTGCCAG CAGCTCCTGG GTGTGGTGGG TGTCTTGGCT GGGGACCCAA 1440
GCCTCTTGGA CCTTGGAGGT ATCCACCAGC AGCCGCAGGT CTCCCGATCA CTGTCTTCCA 1500
TCAGGCGGAG GAAGCAGACC TGGTGCTCCT CAGGGCGGTA ACAGATGCAG CCGCTCTGCC 1560
CGTCGAACAG
1570

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(2) INFORMATION ON SEQ ID NO. 608:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1768 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 608:

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GCACAATCCC GGCTCACTGC AACCTCCAAC TCCTGGGTTT AAGCGATTCT CCCGTCTCTA 60
CAAAGTATAC AAAAAAATTA GCCAGGCATG GTGGTGCGTG CCTGTAATCC CAGCTACTTG 120
GGAGGCTGGG GCACAGGAAT CCTTTGAACT TGGGAGGCAG AGGTTGCAGT GAGCTGAAAT 180
CACACTACTG CCCCCAGCC TGGGCAACAG AGCAAGACTC TGTCTCGAAA AAAAAAAG 240
AAAACAATGA AGGAAAAGGA GGGTGAGTTA GCTGGAGTAG AATAGAGGTA TAGAATCGTT 300
CCTAAATAAC CGGCTGCATT GGTTCCTGG AGACTTGCTA AAAACCCAGA TTCCAGGCC 360
CCACTTCTTG GTGCTCCTAA TTCAGTAGCA TCACAGTAGG GTTCCAGAAG CGGTATTTTT 420
AACAAGCTCC CAGGTAATTC TGATGTGCAC CTAGATTTGG AAATCACTGT GTTAAAAAAT 480
ATTGTGAGGT AAGTTGGTCA GTTAGGTTGG GCAGCTTTTA TTTCATTGCT AAGGGATTTG 540
GACTTGATGG TGTAATAAAG CATTAAATGA ACAAATATTT ATGGAGCCTG TACTATGTAC 600
CAGATGCAGA CTGTGCTAGC GGTGGGGAT ACAGTGATGA CTTGGTCTGC CTCTAGGTGG 660
CAGGGAGCCA TTTTGGGTTT TCGAACAGAA AAGTGACATA ATGAATGCTG AGTTCTTAGG 720
AAGATTAATC CAGGAGTAGT CTCCAGGATG TACTGGAAGG AGAGAAGCTG AAACCAGGGA 780
GGCTGCTGTG TTTGCAGTTG GCTGCCAGT GCTACCTCTG CAGAGACAAT CAATGTCCTG 840
AAGGTAGCTG GTATGTCTGT GTGCACTGAC ACGAGCCTTC CTACCAAGCC CCAGGGGCTC 900
CATGCTGGAG AATGCACGTA GGGCTAGGGT GAGCACTAAC TTCACTTCAG GAGAGCAAGG 960
AACAGTGTGG CTCTTCCATT TTTCAATTCT GTAAGCACAT CACCCTTTTC TCCTCCCCTT 1020
GAGCTGTGTT CTCTGACAGC TGTTTGTGTT TAAAGCCAGC AGCCCCTAAA GCACGTCCCA 1080
GCCTTGCTCT CTCTGTGCTT TCCCCACCA CTGCTGCTGC ACGCCTCATT TGCTGGGCCA 1140
CTTTAGTGGT GGAACCATTA GAGGCTGAGT GACTTAAAGG AGATTGAGTC TGTCTCGACC 1200
CCGAGAGAGA GTGGGATGGA TGGATGCATC GTCTCATTTA GAAAGTGTG CCTCTGACTC 1260
TAACACACTC TTCTCTCTTT CTTTACCGCC CTCCCTGTGT GCGTCCCTGG GGGGGCGTGG 1320
GCTAAACCCC TTCCGTCCCC CTTTCTCCTT CTCTCTCACA GTGTAGGCAC CACTTCTCTT 1380
ACAATTTAGG CTTTCTCTCT GCCTTGGGCT GAGTGAGGAA GAGGAGTGCT GTTCTGCCT 1440
TCCTAGCCCA GCTGGGTCTG ACCAGAGGCT ACTGTGTACC CATTTACCAT GCGTGATTGT 1500
TAACTCAGAG TGGGGTGTAG CCAGGTATTG ACTGAATGTA TGTTCTTGCT GACCTGTGTT 1560
TTTTTCTGTA GGGACCAAAG CAGTATCCTT ACAATAATCT GTACCTGGAA CGAGGCGGTG 1620
ATCCCTCCAA AGAACCAGAG CGGGTGGTTC ACTATGAGAT CTGAGGAGGC TTCGTGGGCT 1680
TTTGGGTCTT CTAAGTAGGA CTCCCTCATT CCTAGAAATT TAACCTTAAT GAAATCCCTA 1740
ATAAACTCA GTGCTGTGTT AAAAAAAA

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1768

(2) INFORMATION ON SEQ ID NO. 609:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1001 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 609:

TAAGGAGACT	GAAAGGTGAT	TCATTTAGTG	AGTAGCGATT	ACAGAATTTT	TAAAACAGTG	60
GGGGCGGGGG	GGGCGGCGGG	GAGGAGGGCT	GGAATTGTCC	TCCAGCGCAT	ACAAGGTTGT	120
TGCTGCCAGA	GAAATCCAGC	AGGAAAAGAGC	AGCATTCTTT	CACCTTTTCC	GCCTCTGAAG	180
CGGAGGAGAA	CTTCATTTCC	CAGCAGCCCT	TAAGATTCCT	CCGCGCACTG	CGTAGCGTCT	240
CCGGCATTCT	GCTTTCCGGG	GCTCTGCCTT	CCGGTGCCTC	GTTTACGGCC	AGTTTGAACC	300
AAAGACGCCC	AANGGTTGAG	GCCGAGNTTC	CAGAGCATGG	GGTCTCGGTT	GTCCCAGCCT	360
TTTGAGTCCT	ATATCACTGC	GCCTCCCGGT	ACCGCCGCCG	CGCCCCGCCA	ACCTGCGNCC	420
CCCAGCTACA	CCCGGAGCGC	CGACCTNCCC	CNAGCAGAAC	ACCGCCTNGT	TGAAGANCCT	480
GCTGGAGCTG	TCGNCGTNGC	TTTCTGGGTT	GGGGCTGATG	GGGGNNCGGG	CGGGTACGTG	540
TACNTGGGTG	GCANCGGAAG	CCCATGAAGA	TNGGGATACC	CCCCGAGTNC	CATGGACCNA	600
TTACNGCAGA	TGGTCATCGN	NGCCTCANGC	NATTGCCACC	TNGGGGTANT	CGTTGTNCAT	660
NGGCAGACCC	CAAAGGGAAN	GGCCTANCCG	CGTTGTTTNG	AAAGNTACCA	CCANGTGAAT	720
NCTGTCTTCT	GTCTNCTNGT	CCCNTTTNC	CCGTGACACA	CAGAGCAGGC	ATGGAATTTA	780
ATGGGNTGTT	CTGGNACNAG	ACACTTGATC	ATGGACAGAC	ATCACTACTN	NGTGGATACT	840
NNACAAGACT	GAAAAGNAAA	ATCGTATGTT	GTCATTCTNC	TGGCTANTGG	AGTGTGTTGT	900
GCCTTCACAG	ATTTACACAG	AACCAATAAA	TCCCTCAGAG	AAGTAAAAAA	NAAAAAAA	960
AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A		1001

(2) INFORMATION ON SEQ ID NO. 610:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2515 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 610:

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GGTGTGGAAA CTACTGCAAA TAGTAGCACT TCACTGAGAT CTACAACTCT TGAAAAAGAA 60
GTTCTGTGCA TCTTCATCCA CCTTTTAAAC ACTGGATTAT TCCGGATAAA AATTCAAGGA 120
GCCACTGGAA AATTTAATAT GGTCATCCCT CTTGTGGATG GGATGATTGT CAGCAGGCGA 180
GCTCTTGGCT TTCTGGTGAG GCAGACTGTA ATTAACATTT GTAGAAGAAA GAGACTGGAA 240
AGTGACTCCT ACAGTCCCCC CATGTCCGCC GGAAACAGAA AATCACCGAC ATTGTCAACA 300
AGTACCGGAA CAAGCAGCTG GAGCCAGAGT TTTATACTTC ACTTTTCCAG GAGGTGGGAC 360
TCAAGAACTG CAGTTCTTAG ACCACTGAAT TTCTAAGACT GTTGAAGTCC AGTTTGGGAA 420
CTATAACACA GCAGAACAGT TTGATAGGTG ATCACTGTAA AAATAAAAAC AAATCACTCC 480
CAAGAGCTTA CTGTTTAATC ACCAGAATAG AAGAAACACA TTATAACCCA TTTGATAGAA 540
GACTTTGGGC TATCTAGTGA AATGGGCTCC CAGACACAAT CATACTCCTG CTGATAATGA 600
TGATATACAT TTTAGCCATA AACTTTCTTT TAAAAGTGAC AATTTTAGTT AAACATAAGC 660
CTTTTGAGGA GAAAGGCTTT TATGCATCTC AGTTAAACAC GTGCATTGGT AGTATCAACA 720
AATTTGCAAT ATAGAAGTTG AAGATAGTTT TTTNCCTCAC TTTTLAGGAG GCTGTATTCA 780
AAATTAATAA CTCAGAATCT TACAGGACAT TTAAAGGACT CATGTTGATA GCATGGAGGA 840
GAAGGAAAGA AGTCACAGCC TTCTACTCAG TTGTAGGTCT TCTTGTCATC CAGCTGTCAC 900
ACTGACAAAA AGAAAAGATG ATANCATGTT TTTTGTCTCA GATAAGAAGC CTGACATTAA 960
AAGATGTCAT ATTTTTTTCT CCACATTTCA AAAAGTTGTC CTTCTCATCA CTGCACAGAT 1020
CTGTCTGAAA GCCTCAGTTT CTGAGTGACC CAGGAACAGA TCAGAAATGG AGCATGGCCT 1080
TGTCCTTTAA TGGGGATGCA AATAAAGTTT GTGGGGTTAA AAGTTATAAG ACAGCAGTGA 1140
TACCCCACTC TCTCCATTAT TGTCCAGCGG GGTGACATAA TGACAGGTTA AATATTTGTG 1200
ATTCATTGAT TAAATATTAT TTAAAGAAAT GTAAAAAATA AAAAAAGGTT GAAAATTATT 1260
TGGTTTCATC CATTGTCTCT TATTTTCAGGA CCAAGCAGCA AACTGCAGTA GTTTGTGAAG 1320
GATTCTAATA TGGGGTTCAG GAATAGCCTC TCAACGCTAC TAATTCAGAT CTCTCCAGAG 1380
GAAGTACTGG ATTTCTCAT AATTGACAAA CATGAGTGAC CACCTCTTTG GGTGGCTACT 1440
GTTAGAAATG GCTGTTGTCA TGTTTTCTGG ACTTTGCCAG CCAACAGATC CCTGCCAGGT 1500
TTTGGAAATA CTTCTATTAC CTCGCTGCTA CTTTCTGCA GGGATAAAAC TTTTGNAGGT 1560
GGCCAGACCC AGAACATCCA AGGATTCTCT TTACAGTGCT ACAGTATACA CTGCTCATTT 1620
ATCCTATTCT CATGTGCTTT CTTCTTTAGT AAGATTATTT TAAGAAAATA AGTGATATTT 1680
AAAGTCCAAA GAGGAATGAT CACAGTTGTA TAAGGGGTGT TTTCCCACTT GAACTCTGAT 1740
GTCAGTCGAC TGTGGGTCAG AGCTACAACC ATCTGTTTGG TTTGATGTTT TGGTGGTTTA 1800
CTTACGGAGT GGGGATAGTG TGAGACCTAA TTCCCTGTGC AAATGTCTCT TATTCCAGAA 1860
ATGTGCATTT TGTCTCTAT AAGCAAGAAA TATGGGCATA GCAGCTCTTG GTTTAAANGT 1920
TTGCCATAAC CTGTTTCATGT TTGTTTTAAG CTCAGGTAAA GATAACCTCC NTCTTTCTAT 1980
GACTCCAAGT TCCATTTCAGG TTATAGTATT ATTCAATAGT TGATTTTCTT TTTAAGCTNG 2040
GGCAATAAAT TGATGTTTCC AGATGGTAAC ATGGGGANGAG GGCATATAGG ATAAAGATNG 2100
AGCAAATTCT ACCCTAAAAA TGNTTCTAGT AGTTCACAGG AAGAAGATGA GGTTTAATAA 2160
CTTCAAGGT AATTCTAGAT TGACATTTTN GAGGGGAAAA TGGGCTCTTG TTCTAGTTGA 2220
AGTGAGCAGA GAANGGCTAT NAAATTAATA TGTAANCTTA CAGCATTCCA GAGGTTAAAA 2280
ATAACTGATG CAGATGTACT TCTTCAGTGT GATTCTTCAG ATCAAACCTT TACTTTTGGC 2340
ATAGTTAATT TCAGAAAAAT GTGCTGTATG TGTGTGTGTA TGAGGGTTGG TCTTGTGAT 2400
CCTTCAGTTA GCTCTAAATT CTGGCAACTC CTTGTAAATC CCATGTATTT GATACCATGA 2460

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(2) INFORMATION ON SEQ ID NO. 611:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 818 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 611:

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TTTTTTTTTT ATTTAAAGCC TGGATTGTAA CCAGATTTTC TTTTTCCTCC CTTCTCAGCT 60
GTAGATATGA TATCTCCTTT CAGGGCCCCA GCTTAAGGGC AAAGTGAGTT AATGTGTAGA120
CAAAGGCGAG GGACAAGAGA GAGTTAACAT CTAGACAGTG GAAAAAGCCA TGGTGTGTGG180
TTTCTGGGAA CCACCAACAC TTGCAGGTTT AGCTTTTTTC CAGGGTTGAC TACAAGAAAG240
AAAACCATGT TTTTGCAAGA TTAATATGTG GTTGAGTGTG CCTAAATTAA CCATCCCCAT300
TTTTATCATA TTTCCACCAT CACTTCAGGG TTTTAAGAGT CAGTGCTCAC CTGGGCGGAG360
CTGGTAGTAC ATTTTGCTTC TTAGAAAGCT AAGTCCTGGG TTCCGTCTGA TTTTAGGTTC420
CAGGAACCTC CTGAGAACAC CCGATCGCAG AGGGTAATTT TCTGGAGTTT GTTTTGCAGG480
GATAGCTGGG AGTATGGCCA CCCTGCTCCA CGATGCGGTA ATGAATCCAG CAGAAGTGGT540
GAAGCAGCGC TTGCAGATGT ACAACTCGCA GCACCGGTCA GCAATCAGCT GCATCCGGAC600
GGTGTGGAGG ACCGAGGGGT TGGGGGCCTT CTACCGGAGC TACACCACGC CAGCTGACCA660
TGAACATCCC CTTCCAGTCC ATCCACTTCA TCACCTATGA GTTCCTGCAG GAGCAGGTCA720
ACCCCCACCG GACCTACAAC CCGCAGTCCC ACATCATCTC AGGCGGGCTG GCCGGGGCCC780
TTGCCGCGGC GGCAGGGGCG CCCCTGGACG TTTTAAGA

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818

(2) INFORMATION ON SEQ ID NO. 612:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1024 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 612:

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GCGGTCGGTA GTGCGGCGCT GTTTAAAGAT GGCGGCGGAG GAACCTCAGC AGCAGAAGCA 60
GGAGCCGCTG GGCAGCGACT CCGAAGTGTT AACTGTCTGG CCTATGATGA AGCCATCATG 120
GCTCAGCAGG ACCGAATTCA GCAAGAGATT GCTGTGCAGA ACCCTCTGGT GTCAGAGCGG 180
CTGGAGCTCT CGGTCCTATA CAAGGAGTAT GCTGAAGATG ACAACATCTA TCAACAGAAG 240
ATCAAGGACC TCCACAAAAA GTACTCGTAC ATCCGCAAGA CCAGGCCTGA CGGCAACTGT 300
TTCTATCGGG CTTTCGGATT CTCCCACTTG GAGGCACTGC TGGATGACAG CAAGGAGTTG 360
CAGCGGTTCA AGGCTGTGTC TGCCAAGAGC AAGGAAGACC TGGTGTCCCA GGGCTTCACT 420
GAATTCACAA TTGAGGATTT CCACAACACG TTCATGGACC TGATTGAGCA GGTGGAGAAG 480
CAGACCTCTG TCGCCGACCT GCTGGCCTCC TTCAATGACC AGAGCACCTC CGACTACCTT 540
GTGGTCTACC TGCGGCTGCT CACCTCGGGC TACCTGCAGC GCGAGAGCAA GTTCTTCGAG 600
CACTTCATCG AGGGTGGACG GACTGTCAAG GAGTTCTGCC AGCAGGAGGT GGAGCCCATG 660
TGCAAGGAGA GCGACCACAT CCACATCATT GCGCTGGCCC AGGCCCTCAG CGTGTCCATC 720
CAGGTGGAGT ACATGGACCG CGGCGAGGGC GGCACCACCA ATCCGCACAT CTTCCCTGAG 780
GGCTCCGAGC CCAAGGTCTA CCTTCTCTAC CGGCCTGGAC ACTACGATAT CCTCTACAAA 840
TAGGGCTGGC TCCAGCCCGC TGCTGCCCTG CTGCCCCCCT CTGCCAGGCG CTAGACATGT 900
ACAGAGGTTT TTCTGTGGTT GTAAATGGTC CTATTTCACC CCCTTCTTCC TGTCACATGA 960
CCCCCCCCCA TGTTTTATTA AAGGGGGTGC TGGTGGTGAA AAAAAAAAAA AAAAAAAAAA 1020
AAAA                                             1024

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(2) INFORMATION ON SEQ ID NO. 613:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1322 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 613:

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GCTGACCACG ACATGTGTCT CCTCCTCTGC ACCTTCCAAG ACCTCCTTAA TAATGAACCC 60
ACATGCCTCT ACCAATGGAC AGCTCTCAGT CCACACTCCC AAAAGGGGAAA GTTTGTCCCA 120
TGAGGAGCAC CCCCATAGCC ATCCTCTCTA TGGACATGGT GTATGCAAGT GGCCAGGCTG 180
TGAAGCAGTG TGCGAAGATT TCCAATCATT TCTAAAACAT CTCAACAGTG AGCATGCGCT 240
GGACGATAGA AGTACAGCCC AATGTAGAGT ACAAATGCAG GTTGTACAGC AGTTAGAGCT 300
ACAGCTTGCA AAAGACAAAG AGCGCCTGCA AGCCATGATG ACCCACCTGC ATGTGAAGTC 360
TACAGAACCC AAAGCCGCCC CTCAGCCCTT GAATCTGGTA TCAAGTGTCA CTCTCTCCAA 420
GTCCGCATCG GAGGCTTCTC CACAGAGCTT ACCTCATACT CCAACGACCC CAACCGCCCC 480
CCTGACTCCC GTCACCCAAG GCCCCTCTGT CATCACAACC ACCAGCATGC ACACGGTGGG 540
ACCCATCCGC AGGCGGTACT CAGACAAATA CAACGTGCCC ATTTGTCGTCAG CAGATATTGC 600
GCAGAACCAA GAATTTTATA AGAACGCAGA AGTTAGACCA CCATTTACAT ATGCATCTTT 660
AATTAGGCAG GCCATTCTCG AATCTCCAGA AAAGCAGCTA AACTAAATG AGATCTATAA 720
CTGGTTCACA CGAATGTTTG CTTACTTCCG ACGCAACGCG GCCACGTGGA AGAATGCAGT 780
GCGTCATAAT CTTAGTCTTC ACAAGTGTTT TGTGCGAGTA GAAAACGTTA AAGGGGCAGT 840
ATGGACAGTG GATGAAGTAG AATTCCAAAA ACGAAGGCCA CAAAAGATCA GTGGTAACCC 900
TTCCCTTATT AAAAACATGC AGAGCAGCCA CGCCTACTGC ACACCTCTCA ATGCAGCTTT 960
ACAGGCTTCA ATGGCTGAGA ATAGTATACC TCTATACACT ACCGCTTCCA TGGGAAATCC1020
CACTCTGGGC AACTTAGCCA GCGCAATACG GGAAGAGCTG AACGGGGCAA TGGAGCATAC1080
CAACAGCAAC GAGAGTGACA GCAGTCCAGG CAGATCTCCT ATGCAAGCCG TGCATCCTGT1140
ACACGTCAAA GAAGAGCCCC TCGATCCAGA GGAAGCTGAA GGGCCCCTGT CTTAGTGAC1200
AACAGCCAAC CACAGTCCAG ATTTTGACCA TGACAGAGAT TACGAAGATG AACCAGTAAA1260
CGAGGACATG GAGTGACTAT CGGGGCGGGC CAACCCCGAG AATGAAGATT GGAAAAAGGA1320
AA

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(2) INFORMATION ON SEQ ID NO. 614:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 4458 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 614:

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GCCCGGCGTT AACAAAGGGA GCCGATACCG ACCGGCGTGG GCGCGGAGCG GCGGGCCGCC 60
ACCGAGCGTG CTGAGCAACC GCAGCCTCCG CGGCCGAGAG TGCAGCGAGC AAGGGGACAA 120
AAAGTTCCGC AAAGCCCGCA CAACCAGCAC CACAGAGAGA AGGGAAGAAC GGCATCCAGC 180
CCACCAGAAA TGGACCGACA CACCTCAGCA TCTCCAAACC CCGCAGCACA CGTGACCATA 240
AACCAGCAAA GATGAGTTTT GATCATCCTG AGAAAAATGG GCCTTGGCCT GCAGACCCAA 300
TAAACCTTCC CTCCCATGGA TAATAGTGCT AATTCCTGAG GACCTGAAGG GCCTGCCGCC 360
CCTGGGGGAT TAGCCAGAAG CAGGCTTGTT TTCCTGCTCA GAACAAAGTG ACTTCCCTGA 420
ACACATCTTC ATTATGATTC ACACCAACCT GAAGAAAAAG TTCAGCTGCT GCGTCCTGGT 480
CTTTCTTCTG TTTGCAGTCA TCTGTGTGTG GAAGGAAAAG AAGAAAGGGA GTTACTATGA 540
TTCCTTTAAA TTGCAAACCA AGGAATTCCA GGTGTTAAAG AGTCTGGGGA AATTGGCCAT 600
GGGGTCTGAT TCCCAGTCTG TATCCTCAAG CAGCACCCAG GACCCCCACA GGGGCCGCCA 660
GACCCTCGGC AGTCTCAGAG GCCTAGCCAA GGCCAAACCA GAGGCCTCCT TCCAGGTGTG 720
GAACAAGGAC AGCTCTTCCA AAAACCTTAT CCCTAGGCTG CAAAAGATCT GGAAGAATTA 780

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CCTAAGCATG AACAAAGTACA AAGTGTCTTA CAAGGGGCCA GGACCAGGCA TCAAGTTCAG 840
 TGCAGAGGCC CTGCGCTGCC ACCTCCGGGA CCATGTGAAT GTATCCATGG TAGAGGTCAC 900
 AGATTTTCCC TTCAATACCT CTGAATGGGA GGGTTATCTG CCCAAGGAGA GCATTAGGAC 960
 CAAGGCTGGG CCTTGGGGCA GGTGTGCTGT TGTGTCTGTA GCGGGATCTC TGAAGTCCTC1020
 CCAACTAGGC AGAGAAATCG ATGATCATGA CGCAGTCTG AGGTTTAATG GGGCACCCAC1080
 AGCCAACTTC CAACAAGATG TGGGCACAAA AACTACCATT CGCTGATGA ACTCTCAGTT1140
 GGTACCACA GAGAAGCGCT TCCTCAAAGA CAGTTTGTAC AATGAAGGAA TCCTAATTGT1200
 ATGGGACCCA TCTGTATACC ACTCAGATAT CCCAAAGTGG TACCAGAATC CGGATTATAA1260
 TTTCTTTAAC AACTACAAGA CTTATCGTAA GCTGCACCCC AATCAGCCCT TTTACATCCT1320
 CAAGCCCCAG ATGCCTTGGG AGCTATGGGA CATCTTCAA GAAATCTCCC CAGAAGAGAT1380
 TCAGCCAAAC CCCCCATCCT CTGGGATGCT TGGTATCATC ATCATGATGA CGCTGTGTGA1440
 CCAGGTGGAT ATTTATGAGT CCCTCCCATC CAAGCGCAAG ACTGACGTGT GCTACTACTA1500
 CCAGAAGTTC TTCGATAGTG CCTGCACGAT GGGTGCCTAC CACCCGCTGC TCTATGAGAA1560
 GAATTTGGTG AAGCATCTCA ACCAGGGCAC AGATGAGGAC ATCTACCTGC TTGGAAAAGC1620
 CACACTGCCT GGCTTCCGGA CCATTCACTG CTAAGCACAG GCTCCTCACT CTTCTCCATC1680
 AGGCATTAAA TGAATGGTCT CTTGGCCACC CCAGCCTGGG AAGAACATTT TCCTGAACAA1740
 TTCCAGCCTG CTCCTTTTAC TCTAGGGGCC TCTGTACGCA AGACCATGGG GACTTCAAGA1800
 GCCTGTGGTC AGGAAATCAG GTCCAGCCTT CCCTGTAGCC AGACAGTTTA TGAGCCCAGA1860
 GCCTCCTGCC ACACACATGC ACACATATCT AGCATTCTTT CCAGACAGCA TCCTCCCCCG1920
 CTTCCACCTT GGTAGATGCA AGGTCTATCT CTCCTCATG GGTGGCCAAA GCTGGGCTTT1980
 GTTTTTCCCA GCAGAAATGAT GCCATTCTCA CAAACCAATG CTCTATATTG CTTNGAAGTC2040
 TGCATCTAAA TATTGATTTT ACGNTTTTAA AGNAAATTCT NNCTTAAATT ACAATTGTGC2100
 CCAATGCAGG GTGGNCTCTN NGGGGGGCAA GTAGGTGGTA CAGGGGATTG GAAACATCCT2160
 CCGCGCCTCC AGAGAAAAGT TGCTCCCGAG GTCCATGCCC CTGGAACGTG TTCCTATCAC2220
 TCTGGCTGGT TGGGCTGGTC CTTAGACTGG GTGCTTATGA TTTAAAGGGT CTTGGTTAAG2280
 CCCACTTTCC CTCTCCATGT GGAGATGGAA GGTAGAGAAG GATACAGTGT CTATCCTCAA2340
 GTTGCTACGG TTCAGTGAGA GAGGCAGACA TCTGAACAGG NCAGGTAGGA TTCAGTGTGC2400
 TCAGTGCCT GGGGATTTGG AGAGAGATGG GCTTGCTCTC TCTGTGCACC CAGGAGGGCC2460
 ACGCACTTAA AACTGTGTTT GTGGATCAGA GAAGGCTTTA TAGCACAGGG GGCATTCCAG2520
 TGAGTCTTAG AGGAAGAGAA GAAACATGGC AAGCAGATTA CATCTGAGCC GTTTGAATTG2580
 TGTTTTTCTT TCTTCCCATG TTTATTTTCT AAGATCTACC TGAAGTTAGN AGACTCAAGA2640
 TATTTTTTTT GGAAACCTCC TACCCATGTC TGAGGTAGCA AGTGCAGCCT CACGACAGAT2700
 ACCAGGCAAT CCAGAGCCAC AAAACGTGAT TCCTCCAGGC TCTGCCTGGC CTGACCCTGT2760
 CCTGTACAGT GGGTTTACAT ACCAGTCCCA TTCTTCCTTT TCAATACCTA CCCCCAAATC2820
 TTCTCCTAAC CACCATCTGT TTTTTTTTAT TTAAGCATT TTTTGCTTTA AAAGCATCCT2880
 GACCCCAATT TCTTTGAGCT CACGGGCCCT TTGCTGAAGG TCTCTCAGGG TGAGTGGTG2940
 TGGCTCTCTG GACTTAACGT CACTCTCAGN AGGTGAGAAC CTTNGGAGAT CAGAAGTAT3000
 TCTACCAGG TGTGAGAGGT GTGGNTANGC AGATTGCAAT GCTCTGCACC TCTTNCCTTG3060
 CAAGTGAGNC AACTTNCAGG NCTCTCTGGG NCAGAGGCTG GCCCACTGTA GTTTGCAGAC3120
 ATGCTCTCCA GATGGNTTTT ACTAAGTCCC CTCTCCCTGN ATANGGGAAT CCTGNCTGGN3180
 ACCAGCGCAN GCCCTNNGGT GTNGGANNGA GGTTNAAAAG ACTTGNCACA GGNATACCA3240
 AGTNCATGCT GNTAGANGCC AGGATTCCTA GACCCAGGGC TCTGCACTCT CAAGGCTGGC3300
 CCCATGTGCT CAAGGGGGTC TAATGTTTGG GCTCCAAACT AACCATCTCG GAGCTGGGCT3360
 CCTCATTTAC TGCCAAACCC TCAGNCTTAT GTAGCNTAGA AAGGGCCCTG GANGTGNAGA3420
 AAGCCTGGAT TTTCAAATTG ATGCTCCCCT ACTNGACTAG NCTGTGCCAC TCNTGGGCAA3480
 ATGCTCTTCC TTGAGCCTGT TTCCACACCT GTAAAGTGGG GATGATGATC CTATCTCACT3540
 GCTTTTNGTG NAGGATTACA GGNNAAGCA CCTGTCTGG CTCTGTACCT GGCACGTAGT3600
 ANGGTGCTCA GTTCATGCTG GTTTCCTTCC GCTCTTTAGT AGGGACCTGC TCTGTGCTCA3660
 CACCTCGGCT GCATGCACCC TGCTGTGACG GAGGCTAGTG TGGAGAGGT CCTGTCTCA3720
 GGGAAATTAAC TGTCTTATTG GGAGACAACA ACTGTCTCTC CGCTGCCTGC AGCTNCCAAT3840
 TGNCAAAGCA GTGGACAACA CAGAACACGN CCCTCCTCCT TAAGTGTCTG ATAGGACAAG3900
 CTGATTCTGC TTGGGAATGG GCGGANACAG NTGGGCTGCT TAACTGCTGT ATTTGACACA3960
 CCCCTTACCC CTCTCTGGGC CCATGAATTC CTGGCTTGGT TTATGTTCTG CGACAGCAGG4020
 CTGATTTTAA TCTTCGAATC ATGACACTGA GTGCAGAGGA GGTGGCATTG TTTAATTATT4080
 ACATACATGT TNGGTGTGAA GACTGGGACG AACTGGGTA GAATCTAGTT TTTAATTATT4140
 ATTAATATAA AGGATCAAAT TAATTTAAAT ATGAATCTGA AGTCCACAGA ACTTTNNNNN4140
 AAGTGCTGTC CAGGCCAACA CTTTGGGTAAA ATGCAAATTA TGATATGGAC GTTATCATTG4200
 GTCTGGTGAG ATGTTTCATA TTTGTGACAG TTAATTTAAA AATTATGACT TAATGCTGCC4260
 TGTGTCTATG GGGTTCTGTC TTCTTTGATA GCCATCTATT CATCTGGATC ATGGGACCCT4320
 CTCTAATCCT TCCACCAATC AAATAAGCTA TTGCTATTGG TTTGGAGTTG AGATATCAGT4380
 CTCGGAAACT TCTGAAAAAT GCTAATAATT ACCCAAGGAT TATGTCAAAT TTTAAAATAA4440
 ATGTGTGTGT GTTTCTTT

(2) INFORMATION ON SEQ ID NO. 615:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1562 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 615:

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TGGAGGCAGC TAGCGCGAGG GTGGGGAGCG CTGAGCCGCG CGTCGTGCCC TGCGCTGCCC 60
AGACTAGCGA ACAATACAGT CAGGATGGCT AAAGGTGACC CCAAGAAACC AAAGGGCAAG 120
ATGTCCGCTT ATGCCTTCTT TGTGCAGACA TGCAGAGAAG AACATAAGAA GAAAAACCCA 180
GAGGTCCCTG TCAATTTTGC GGAATTTTCC AAGAAGTGCT CTGAGAGGTG GAAGACGATG 240
TCCGGGAAAG AGAAATCTAA ATTTGATGAA ATGGCAAAGG CAGATAAAGT GCGCTATGAT 300
CGGGAAATGA AGGATTATGG ACCAGCTAAG GGAGGCAAGA AGAAGAAGGA TCCTAATGCT 360
CCCAAAAGGC CACCGTCTGG ATTCTTCCTG TTCTGTTTCTG AATTCGCCCC CAAGATCAAA 420
TCCACAAACC CCGGCATCTC TATTGGAGAC GTGGCAAAAA AGCTGGGTGA GATGTGGAAT 480
AACTTAAATG ACAGTGAAAA GCAGCCTTAC ATCACTAAGA CGGCAAAGCT GAAGGAGAAG 540
TACGAGAAGG ATGTTGCTGA CTATAAGTCG AAAGGAAAGT TTGATGGTGC AAAGGGTCCT 600
GCTAAAGTTG CCCGGAAGAG GGTGGAAGAG GAAGATGAAG AAGACGGGGG GGGGGGGGGG 660
GGGGGGGGGG GGGGGACGTA TAGTCGGGTC GGCTGGTGGA GTAGCCCAAA AGAAGGGGAG 720
CGCCGTAATT GACACATCTC TTATTTGAGA AGTGCTGTGT GCCCTCATTG GGTTTAATTA 780
CAAAATTTGA TCACGATCAT ATTGTAGTCT CTCAAAGTGC TCTAGAAATT GTCAGTGGTT 840
TACATGAAGT GGCCATGGGT GTCTGGAGCA CCCTGAAACT GTATCAAAGT TGTACATATT 900
TCCAAACATT TTTAAAATGA AAAGGCACTC TCGTGTTCTC CTCACTCTGT GCACTTTGCT 960
GTTGGTGTGA CAAGGCATTT AAAGATGTTT CTGGCATTTT CTTTTTATTT GTAAGGTGGT1020
GGTAACTATG GTTATTGGCT AGAAATCCTG AGTTTTCAAC TGTATATATC TATAGTTTGT1080
AAAAAGAACA AAACAACCGA GACAAACCCT TGATGCTCCT TGCTCGGCGT TGAGGCTGTG1140
GGGAAGATGC CTTTTGGGAG AGGCTGTAGC TCAGGGCGTG CACTGTGAGG CTGGACCTGT1200
TGACTCTGCA GGGGGCATCC ATTTAGCTTC AGGTGTGCTT GTTTCTGTAT ATAGTGACAT1260
AGCATTCTGC TGCCATCTTA GCTGTGGACA AAGGGGGGTC AGCTGGCATG AGAATATTTT1320
TTTTTTTAAG TGCGGTAGTT TTTAACTGT TTGTTTTTAA ACAAACTATA GAACTCTTCA1380
TTGTCAGCAA AGCAAAGAGT CACTGCATCA ATGAAAGTTC AAGAACCTCC TGTACTTAAA1440
CAGGATTCGC AACGTTCTGT TATTTTTTTT GTATGTTTAG AATGCTGAAA TGTTTTTGAA1500
GTTAAATAAA CAGTATTACA TTTTAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA1560
AA

```

1562

(2) INFORMATION ON SEQ ID NO. 616:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2278 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 616:

```

GGCAATTTCC GTTAGGTGCT GAAGGCTGTG GCGCGCGGCT GTCCCCATTC CCACGTGAAG 60
CGCTACGCTA GCATCGCTCG GCTGGCGGGCT CCCAGCTCGC CGCGGAGCAG TCCCGGCAGC 120
AGCGGGGGAC CGGAAGTGGC TCGCGGAGGC TCAGAAGCTA GTCCCGGAGC CCGGCGTGTG 180
GCGCCTCGGA GCACGGTGAC GCGCGCATGT CCTAATCTG CTCCATCTCT AACGAAATGC 240
CGGAGCACCC ATGTGTATCC CCTGTCTCTA ATCATGTTTA TGAGCGGGCG CTCATCGAGA 300
AGTACATTGC GGAGAATGGT ACCGACCCCA TCAACAACCA GCCTCTCTCC GAGGAGCAGC 360
TCATCGACAT CAAAGTTGCT CACCCAATCC GGCCCAAGCC TCCCTCAGCC ACCAGCATCC 420
CGGCCATTCT GAAAGCTTTG CAGGATGAGT GGGATGCAGT CATGCTGCAC AGCTTCACTC 480
TGCGCCAGAG CTGCAGACAA CCGGCCAAGA GCTGTCACAC GCTCTGTACC AGCACGATGC 540
CGCCTGCCGT GTCATTGCCC GTCTCACCAA GGAAGTCACT GCTGCCCGAG AAGCTCTGGC 600
TACCCTGAAA CCACAGGCTG GCCTCATTTG GCCCCAGGCT GTGCCAAGTT CCAACCAAG 660
TGTTGTGGGT GCGGGTGAGC CAATGGATTT GGGTGAGCTG GTGGGAATGA CCCCAGAGAT 720
TATTGAGAAC CTTCAAGACA AAGCCACTGT GCTAACCACG GAGCGCAAGA AGAGAGGGAA 780
GACTGTGCC T GAGGAGCTGG TGAAGCCAGA AGAGCTCAGC AAATACCGGC AGGTGGCATC 840
CCACGTGGGG TTGCACAGTG CCAGCATTCC TGGGATCCTG GCCCTGGACC TCTGCCCCGC 900
CGACACCAAC AAGATCCTCA CTGGTGGGGC GGATAAAAAT GTCGTTGTGT TTGACAAAAG 960
TTCTGAACAA ATCTGGCTA CCTCAAAGG CCATACCAAG AAGGTCACCA GCGTGGTGT 1020
TCACCCTTCC CAGGACCTGG TGTTTTCTGC TTCCCCGAT GCCACTATCA GGATTTGGTC 1080
GGTCCCCAAT GCCTCTTGTG TACAGGTGGT TCGGGCCCAT GAGAGTGCTG TGACAGGCCT 1140
CAGCCTTCAT GCCACTGGCG ACTATCTCCT GAGCTCCTCC GATGATCAGT ACTGGGCTTT 1200
CTCTGACATC CAGACAGGGC GTGTGCTCAG CAAGGTGACA GATGAGACCT CCGGCTGCTC 1260
TCTCACCTGT GCACAGTTCC ACCCTGACGG ACTCATCTTT GGAACAGGAA CCATGGACTC 1320
TCAGATCAAG ATCTGGGACT TGAAGGAACG TACTAATGTG GCCAACTTCC CTGGCCACTC 1380
GGGCCCCATC ACTAGCATCG CCTTCTCTGA GAATGGTTAC TACCTGGCTA CAGCGGCTGA 1440
TGACTCCTCT GTCAAGCTCT GGGATCTGCG CAAGTTAAGA ACTTTAAGAC TTTGAGCTG 1500
GATAACAAC TTAGAGTAAA GTCACTGATC TTTGACCAGA GTGGTACCTA CCTGGCTCTT 1560
GGGGGCACGG ATGTCCAGAT CTACATCTGC AAACAATGGA CGGAGATTCT TCACTTTACA 1620
GAGCATAGCG GCCTGACCAC AGGGGTGGCC TTCGGGCATC ACGCCAAGTT CATCGCTTCA 1680
ACAGGCATGG ACAGAAGCCT CAAGTTCTAC AGCCTGTAGG CCCTGGCCCT TCTGATGGAA 1740
GCTGGGCCTC ATCTCAGTAG AGGGGTAGAA TTAGGGTTTG GGGGGGGGTG GGGGGAATCT 1800
ATGGGGGGAG GGGGCTCTGT GGGGTGGGAC ATTACATCA TTCACTCTG GTCTGAGTGG 1860
TGGCCTGAGA ACCATGGTGG CATGGACCAC CCTCATCCAG GCAACTCCAG GCCCCATGG 1920
AACGGATGTG GAAGGAAGAA CTGTCAACCT CTTAAGGCCC AGGGTCGGAG CCCAGGGCCT 1980
CTCCCTTCCT GTCGTTCAAT GGACGTGGTG GTGGCTGTTC CACACCCATT TTGTTGAGT 2040
TCCTGTGAGA CAGGAGAGGC TGAGCCAAGG GAACTGTGAA GGGGATGGGC AGGAGGGCTT 2100
GTGCAGGGTT TTGTAAGCAG TGATCTAGTT TCATTAAAAA AAGAAAACAA TAACCATAAC 2160
CACCTCCCCG TGTCTGTCTG CACCAGGAGC ACCTGGGACT GGGGAAGTCAA GGGGAGGGAG 2220
CACACACTGG GACACTGGCT TCCGGGAAGC CCATCTTCCT TTCCTTTCAC AGTCTTTA 2278

```

(2) INFORMATION ON SEQ ID NO. 617:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 931 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 617:

```

CAGGGGCGTG CAGCCCGCTT GCCAATCAGA GCGCGGCTGA GCGGCCCCGC AGCCAACCCC 60
CGAGGAGCGG CCGGCTGGCG TCCGCCGCGC CCAGGAGTTG GGGATGTCCT ACAAACCCAT120
CGCCCCTGCT CCCAGCAGCA CCCCTGGCTC CAGCACCCCT GGGCCGGGCA CCCCAGTCCC180
TACAGGAAGC GTCCCGTCGC CGTCGGGCTC AGTGCCAGGA GCCGGCGCTC CTTTCAGACC240
GCTGTTTAAC GACTTTGGAC CGCCTTCCAT GGGCTACGTG CAGGCGATGA AGCCACCCGG300
CGCCCAGGGC TCCCAGAGCA CCTACACGGA CCTGCTGTCA GTCATAGAGG AGATGGGCAA360
AGAGATCCGG CCTACCTATG CTGGCAGCAA GAGCGCCATG GAGCGCCTGA AGAGAGGTAT420
CATCCATGCC CGGGCCCTAG TCAGAGAGTG CCTGGCAGAG ACAGAGCGGA ACGCCCGCAC480
GTAACAGGAA GCGCCTCGGC CTCAGCGTCT GGACCTATCC GGCCACTGCA GAGCACCCGC540
TTCTCCCTGG CTTTCATCCC GAGTTGCACT AACCATCCTG GGCTTCCTGT CCTGTGTCCC600
TTGGTGGGTC CCTCCAGGA ACCAAGGAGT GGCCCTCCAG GTGGCAGCAC TAAGGACACC660
CCCCCACAAC AAGAGTTAGC AGCGAGGTCC GCATGAGTCC CACCCATGAC CTGCCGACAG720
TGTGCCCCAC CGGAACCTTT GTGGCCCCTA CCGCTCAGCC CTTCCCAGCA CTTCTCCCAC780
TTTGTCCCGA GCCTCCTTCT CGCCCAGCAG GGGCACAGGC CTGGCACCTC CCTGCCTTGT840
GTCCTGAGCC ATAGTGACTC TTTTATCTGT GTGTCTTTTG CTAAATATGC CCTTTTATA900
TTAATAAAAG ATGATTGGA GTTGTGCTCT C

```

931

(2) INFORMATION ON SEQ ID NO. 618:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 447 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 618:

```
ELPSSPPPGL PEVAPDATST GLPDTAAPE TSTNYPVECT EGSAGPQSLP LPILEPVKNP 60
CSVKDQTPLQ LSVEDTTSPN TKPCPPTPTT PETWGGGGGG APSSTPCSAH LTPSSLFPSS120
LESSSEQKFY NFVILHARAD EHIALRVREK LEALGVDPGA TFCEDFQVPG RGELSCLQDA180
IDHSAFIILL LTSNFDCLRS LHQVNQAMMS NLTROGSPDC VIPFLPLESS PAQLSSDTAS240
LLSGLVRLDE HSQIFARKVA NTFKPHRLQA RKAMWRKEQD TRALREQSQH LDGERMQAAA300
LNAAYSAYLQ SYLSYQAQME QLQVAFGSHM SFGTGAPYGV RMPFGGQGGL GAPPPFPTWP360
GCPQPPPLHA WQAGTPPPPS PQPAAFPQSL PFPQSPAFFT ASPAPPQSPG LQPLIIHHAQ420
MVQLGLNNHM WNQRGSQAPE DKTQEAE 447
```

(2) INFORMATION ON SEQ ID NO. 619:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 205 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 619:

```
ADAGGGTERS LLSLPPELLV LPGTDGAAPG GFWEPHVIWD WGALWGQNAL WGPAGPGSPA 60
TLSHLAGVPA AATPARMAGW HPPTALPTAS SLSTVTALPA VPSLPYGLTR TPSEPRAATP120
HYPPRTDGTG GAEQPHVEPE RVPGARGQDA GGRMTACPCL TTWGTPLDPG IGQDPIEHPG180
LPCALWTVED EVICHFQDIV REPFI 205
```


(2) INFORMATION ON SEQ ID NO. 620:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 409 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 620:

```

KSRLSVTLMP VQLSEHPewn ESMHSLRISV GGLPVLASMT KAADPRFRPR WKVILTFVVG 60
AAILWLLCSH RPAPGRPPH NAHNWRLGQA PANWYNDTYP LSPPQRTAG IRYRIAVIAD120
LDTEPTAQDE NTWRSOLKKG YLTLSDSGDK VAVEWDKDHG VLESHLAEKG RGMELSDLIV180
FNGKLYSVDD RTGVVYQIEG SKAVPWVILS DGDGTVEKGF KAEWLAVKDE RLYVGGLGKE240
WTTTTGDVVN ENPEWVKVVG YKGSVDHENW VSNYNALRAA AGIQPPANLI HESACWSDTL300
QRWFFLPRA SQERYSEKDD ERKGANLLS ASPDFGDIIV SHVGAVVPTH GFSSFKFIPN360
TDDQIIIVALK SEEDSGRVAS YIMAFTLDGR FLLPETKIGS VKYEGIEFI 409

```

(2) INFORMATION ON SEQ ID NO. 621:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 249 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 621:

```

KLSPDGLAQC FRFELNELDA FVFHASDLGL RQGEAPVQRE GHDVGGDSAA VLLGFEGHND 60
LVVGVGDELE GREAVSGDHR PDVAHSDVAE VRGGAQQQVG ALALVLLAV ALLAGAARQE120
EPALQRVTPA GRLMDEVSWR LDAGSSPQGV VVGHPVLVVH AALVAHHLHP LRVLVHHITR180
SGRPLLAQAA HVQTLVLHCQ PFGLEAFLHG AVAVGQNHPG HGFAAFDLVD DPRPVIHGVE240
FPIENNQVG 249

```

(2) INFORMATION ON SEQ ID NO. 622:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 255 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 622:

```

AAAPVSLHDA AGDLRRDPGG GGGGGVPHGG GEGQEVVPAE PGVPAPQHA E PVAAAGAAQ 60
LQTEEQPGLQ RLRLGPV RGA ARGGDARVRG PRGDRRVNPE SARALLPGDP QGPGTAAPRA120
LGLPPRCEPV GAPLAALALA RERRERGRFP RPCKCLFFNS SQCELCCECV RGGAPALSRR180

RVATPCPCPM VCNSDFAHRS TVPPSAHPFT LTPTLSLNTF IIVRRGRWDF GRSAAATASG240
GLIFIFALRW LKAFT                                     255

```

(2) INFORMATION ON SEQ ID NO. 623:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 196 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 623:

```

INAFSHRNAK ININPPDAVA AALRPKSQRP RLTIKVFSE SVGVSVNGCA LGGTVERCAK 60
SELQTIGQGH GVATRRRLSA GAPPRTHSQQ SSHWHEELKNK HLQGRGKRPR SRRSRARASA120
ARGAPTGSQR GGSPSARGAA VPGPCGSPGS RARALSGFTR RSPRGPRTRA SPPRAAPLTG180
PSRSRWSPGC SSVCS C                                     196

```

(2) INFORMATION ON SEQ ID NO. 624:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 242 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 624:

```

VESHRRATH TTVRSPETAR GWKPWPHRLS RYVHSPGRQP HGHGQHLFCF SGRRAFGGHP 60
RQGARASLLA LGLENSPGGS SPEERLGRLA VAGPPRGAQN VSQAGPEAEA PPLRFGHAWG120
AQTPRLGAPG PWTPLPTLPS HIPPFWSQTP AQRKEGFTEE GQGRAWPQGG DEDISGPGSC180
RLLWEEEPV CKLLGLAARP TAGPSLDPCT WPSSCPLAAP GLGTGIEPRG LGWLGQGRDR240
EG                                                    242

```

(2) INFORMATION ON SEQ ID NO. 625:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 216 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 625:

```

GLVMPGELRR PGLGPQAHGL PSPLCPPIFF LFGPRHQHKE RRGSRQKARA EPGPREGMRT 60
FPVQVAAGCS GRKSHASVNC WGWRPAPLQG PALTPARGHP AALWLPLALA QASSLEGWAG120
WARAGTGRGS TSDPDVGWLC PPRREAQOTS YTKAKSTIGE PRSHFMGRRP RPQGPQSKAR180
GRFIPEDSPP GAAPAWGGVS RPLGCLSVCG TPWSTP                                216

```

(2) INFORMATION ON SEQ ID NO. 626:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 299 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 626:

PGISVSVDKM ESSPFNRRQW TSLSLRVTA ELISLVNKNKS SAIVEIFSKY QKAAEETNME 60
KKRSNTENLS QHFRKGTILTV LKKKWENPGL GAESHTDSL NSSTEIRHRA DHPPAEVTSH120
AASGAKADQE EQIHPRSLR SPPEALVQGR YPHIKDGEDL KDHSTESKMM ENCLGESRHE180
VEKSEISENT DASGKIEKYN VPLNRLKMMF EKGEPTQTKI LRAQSRASG RKISENSYSL240
DDLEIGPGQL SSSTFDSEKN ESRRNLELPR LSETSIKDRM AKYQAAVSKQ SSSPTIPMS 299

(2) INFORMATION ON SEQ ID NO. 627:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 94 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 627:

DSAPSPGFSH FFFNTVRVPF LKCWERFSVL LLFFSMFVSS AAFWYLENIS TIADDLFLT60
RESSLAVTLN DSEVHCRLN GDDSILSTDT EIPG 94

(2) INFORMATION ON SEQ ID NO. 628:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 765 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 628:

```

IRPVVQLTAI EILAWGLRNM KNFQMASITS PSLVVECGGE RVESVVIKNL KKTPNFPSSV 60
LFMKVFLPKE ELYMPPLVIK VIDHRQFGRK PVVGQCTIER LDRFRCDPYA GKEDIVPQLK120
ASLLSAPPCR DIVIEMEDTK PLLASKLTEK EEEIVDWWSK FDASSGEHEK CGQYIQKGY5180
KLKIYNCELE NVAEFEG LTD FSDTFKLYRG KSDENEDPSV VGEFKGSFRI YPLPDDPSVP240
APPRQFRELP DSVPQECTVR IYIVRGLELQ PQDNNGLCDP YIKITLGKKV IEDRDHYIPN300
TLNPVFGRMY ELSCYLPQEK DLKISVYDYD TFTRDEKVG E TIIDLENRFL SRFGSHCGIP360
EEYCVSGVNT WRDQLRPTQL LQNVARFKGF PQPILSEDS RIRYGGRDYS LDEFANKIL420
HQHLGAPEER LALHILRTQG LVPEHVETRT LHSTFQPNIS QGKLQMWVDV FPKSLGPPGP480
PFNITPRKAK KYYLRVWIWN TKDVILDEKS ITGEEMSDIY VKGWIPGNEE NKQKTDVHYR540
SLDGEGNFNW RFVFPFDYLP AEQLCIVAKK EHEWSIDQTE FRIPPRLIQ IWDNDKFSLD600
DYLGFLELDL RHTIIPAKSP EKCRDLMIPD LKAMNPLKAK TASLFEQKSM KGWWPCYAEK660
DGARVMAGKV EMTLEILNEK EADERPAGKG RDEPNMNPKL DLPNRPETSF LWFTNPCKTM720
KFIVWRRFKW VIIGLLFLLI LLLFVAVLLY SLPNYLSMKI VKPNV 765

```

(2) INFORMATION ON SEQ ID NO. 629:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 289 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 629:

```

ETQVVIQRKL VIVPYLNDQP GWDSKFRLVN TPEMLFFRND TELFGWKVVK RENKSPVKIP 60
FTIQRSVMDI CFLVFVFIAR NPAFDVDVTH FLSCDAFLVQ DNVLGVPDDH TQVVFLGFP120
CDVERRAWWP QTLGENIHPH LKFSLGNVGL EGAVQSPCFH VLRDQPLSPE DVKSKPLFRG180
PEVLVQDFVG FKFIQAVVSS SISDSTPIFG KDGLWEAFES GDILKQLCWS QLISPGIDSR240
NTVLLWYAAV GPKAGKESVF QINNCFSYFF IPGKGVIIID RNFQVFFLR 289

```

(2) INFORMATION ON SEQ ID NO. 630:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 824 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 630:

```

RVSVLAAASS ALPVAPREAG VTNWPAGCVP EVRSTGEKEV AKTLHRRSRP EWCGARDPPA 60
MLLFVLTCLL AVFPAISTKS PIFGPPEEVNS VEGNSVSITC YYPPTSVNRH TRKYWCRQGA120
RGGCITLISS EGYVSSKYAG RANLTNFPEN GTFVVNIAQL SQDDSGRYKC GLGINSRGLS180
FDVSLEVSQG PGLLNDTKVY TVDLGRVTI NCPFKTENAQ KRKSLYKQIG LYPVLVIDSS240
GYVNPNTYGR IRLDIQGTGQ RLFSVVINQL RLSDAGQYLC QAGDDSNSNK KNADLQVLKP300
EPELVYEDLR GSVTFHCALG PEVANVAKFL CRQSSGENCD VVVNTLGKRA PAFEGRILLN360
PQDKDGSFSV VITGLRKEDA GRYLCGAHSD GQLQEGSPIQ AWQLFVNEES TIPRSPTVVK420
GVAGGSVAVL CPYNRKESKS IKYWCLWEGA QNGRCPLLVD SEGWVKAQYE GRLSLLEEPG480
NGTFTVILNQ LTSRDAGFYW CLTNGDTLWR TTVEIKIIEG EPNLKVPGNV TAVLGETLKV540
PCHFPCKFSS YEKYWCKWNN TGCQALPSQD EGPSKAFVNC DENSRVLVSLT LNLVTRADEG600
WYWCGVKQGH FYGETAAVYV AVEERKAAGS RDVSLAKADA APDEKVLDSG FREIENKAIQ660
DPRLFAEKA VADTRDQADG SRASVDSGSS EEQGGSSRAL VSTLVPLGLV LAVGAVAVGV720
ARARHRKNVD RVSIRSYRTD ISMSDFNSR EFGANDNMGA SSITQETSLG GKEEFVATTE780
STTETKEPKK AKRSSKEEAE MAYKDFFLLQS STVAAEAQDG PQEA 824

```

(2) INFORMATION ON SEQ ID NO. 631:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 267 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 631:

```

ADIAGPRCLP LFNCHIDGCS LSIEVALLHS TPVPALISPG HQVQGGQDKP AVLVTVHEGL 60
AGAFVLQAGQ LAARVIPLAP VFLVRGEFAW KVTGDLESLS QHSRDIPWYL EVWFSFDNLD120
LHGGPPESIA VGQTPVEAGV PAGELVEDDS EGAVAWLLQQ GEAALVLGLN PPLAVHQQGA180
AAILGPFPEP PVLDAFAFLT VVGAEHGHRA SCHPLHHSQA AGNRGLLIDE ELPGLORRAF240
LQLTIRMGST QVAPCILLPQ ACDHHTTE 267

```

(2) INFORMATION ON SEQ ID NO. 632:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 140 amino acids

(B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 632:

GETRVHSQQG GGIKAPSWDW FFREPGPLVK GLLGHVKQYL EQPRPWGYQV ERREGRRLLPC 60
THLPWWAGFS LLGSTLPSPV HDTPRASPC PRPSYRLLFQ DITDNPERME KGGAWVPAVS120
GQKEVACGNL RSPHPRFPKR 140

(2) INFORMATION ON SEQ ID NO. 633:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 127 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 633:

VFPCHLVGAG PTPATTSGTA KGSTRCDYPG PCWQLRIPGT CSDPVSGSSE SQEPRMRALC 60
SPSSKTQGSF PRKGAHVPQR GWLPGCYLFY PTSAAESQGE TASHPKPLGF SREKNLSQKH120
DLFSGCK 127

(2) INFORMATION ON SEQ ID NO. 634:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 140 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 634:

HHQKHMQKG SYWASGLLSP WLGRKGREDG WGSLEFGIDDV HEFGLEGSTT HKEAIIHRLA 60
 GQLLAGCP SH RASINDTGAL SHRIROVGLQ PSSELLVYFL GLLGCCSLAS TNGPHRLIGQ120
 DDLAPVLHVI CDDLLVWWE G 140

(2) INFORMATION ON SEQ ID NO. 635:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 101 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 635:

KVIADNVKDW SKVVLAYEPV WAIGTGKTAT PQQAQEVHEK LRGWLKSNVS DAVAQSTRII 60
 YGGSVTGATC KELASQPDVD GFLVGGASLK PEFVDIINAK Q 101

(2) INFORMATION ON SEQ ID NO. 636:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 329 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 636:

DSIFPLWAVL ALSPPGIRVR MKKSSVSGMT AAGWVWGEA EGKAALRLGV EFLEVWGGGR 60
 VENLEKSQPA RAERECERGS SEGARNVGG SGRSVAVAL VHQHGVRLLG DLQQRVHVGA120
 APAPQVAGLP PLRAALVVVG AHLHHLGGLE HFHLALADLL DVEGEGWHLV DRGLGARVHH180
 VVGREGFAQL VPRRLQFLAP LGGHQARAQL VHALLQGVPR LLQVFLGLEA RLLQVLAGTH240
 LGLLHLLGE GLLEVHAPQ ALRLIRSARD SSITSSTSTA SDESSSAAA SSSGRSPSPS300
 SSPSFSGSAS DSFSDLLMLS LAGSFTSSW 329

(2) INFORMATION ON SEQ ID NO. 637:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 263 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 637:

```
GRLPGYPDRR GPGASSAGAQ AAEEPSGAGS EELIKSDQVN GVLVLSLLDK IIGAVDQIQL 60
TQAQLEERQA EMGAVQSIQ GELSKLGKAH ATTSNTVSKL LEKVRKVSVN VKTVRGSLE120
QAGQIKKLEV NEAELLRRRN FKVMYQDEV KLPKLSISK SLKESEALPE KEGEELGEGE180
RPEEDAAALE LSSDEAVEVE EVIEESRAER IKRRACGAWT TSTRPSPRRR WRRPRCVPAR240
TWRRRASRPR KTWRRRGTPW RSA 263
```

(2) INFORMATION ON SEQ ID NO. 638:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 205 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 638:

```
SGDLRLLVDT SKVQEAHVPS QDTHHTQELL AVQGSLSVGY RPPGGGFGAAP VHEDPHLLGP 60
ASRGAPETAA FFFFFFFFFFP EQHLRVGLLL LPPRLSPRPG PAWPVPNEVG WPGHLHQGGQ 120
LLAGTNKPFH LAMVVVFSMD RGPETRAGRG REHTSLGVGT SLXTPQQLXG PRXXFPXAVQ 180
ASPXPGVCSL AWVELCHIXD KQXGG 205
```

(2) INFORMATION ON SEQ ID NO. 639:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 171 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 639:

```
PVTPRDXPGA GGG SXEGPMQ HPGQSRPXPL AXPAPXWXL M APCGALTCWA RLXLGLSAPX 60
LLIXDVTELD PSQAHSWTW ASLHCXGKXX PRAXKLLRGX EAGAH PQASV FSAPPCPRFR120
ASVHREHHHH QVEGFISPC QQLSSLVQVA WPAHWIGDGP GWARSGAQSG R 171
```

(2) INFORMATION ON SEQ ID NO. 640:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 161 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 640:

```
ISRNEGV LVR GPKSPRSL LR SHSEPPALVL WRDHR LVP GT DYCKDTALVP TEKNTGQQEH 60
TFSQYLATPH SELTITHGKW VHSSLWSDPA GLGRQEQHSS SSLSPRQRES LNCKRSGAYT120
VREKEKGGRK GFSPRP RDA HREGGKEREK SVLESEATLS K 161
```

(2) INFORMATION ON SEQ ID NO. 641:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 127 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 641:

CAYRTEKWKS HTVPCSPEVK LVLTLALRAF SSMEPLGLGR KARVSAHRHT SYLQDIDCLC 60
RGSTGQPTAN TAASLVSASL LPVHPGDYSW INLPKNSAFI MSLFCSTQN GSLPPRGRPS120
HHCIPNR 127

(2) INFORMATION ON SEQ ID NO. 642:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 136 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 642:

WGXGRVRVXG WXRKPMKXGI PPEXHGPITA DGHRLXXLP PXGXRCXXAD PKGXGLXALF 60
XKXPPXEXCL LSXXPXXPVT HRAGMEFNGX FWXXTLVHGQ TSLLXGYXTR LXXKIVCCHS120
SGXWSVCG LH RFHRNQ 136

(2) INFORMATION ON SEQ ID NO. 643:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 132 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 643:

GRXSRAWGLG CPSLLSPISL RLPVPPRPP NLRPPATPGA PTXPXQNTAX LKXLELSXX 60
LSGLGLMGXR AGTCTWVAXE AHEDXDTPRV FWXYXRWSS XPXAIATXGX SLXXGRPQRE120
XPXRVVXKXT TX 132

(2) INFORMATION ON SEQ ID NO. 644:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 131 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 644:

GVETTANSST SLRSTTLEKE VPVIFIHPLN TGLFRIKIQG ATGKFNMVIP LVDGMIVSRR 60
 ALGFLVRQTV INICRRKRLE SDSYPPMSA GNRKSPTLST STGTSSWSQS FILHFSRRLD120
 SRTAVLRPLN F 131

(2) INFORMATION ON SEQ ID NO. 645:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 86 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 645:

LTNMSDHLFG WLLLEMAVVM FSGLCQPTDP CQVLEILLP RCYFSAGIKL LXVARPRTSK60
 DSCYSATVYT AHLSSYSHVLS SLVRLF 86

(2) INFORMATION ON SEQ ID NO. 646:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 646:

KAPNPSVLHT VRMQLIADRC CELYICKRCF TTSAGFITAS WSRVAILPAI PAKQTPENYP60
LRSGVLRKFL EPKIRRNPEGL SFLRSKMYQ LRPGEH 96

(2) INFORMATION ON SEQ ID NO. 647:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 92 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 647:

SSACRCTTRS TGQQAASGR CGGPRGWGPS TGATPRQLTM NIPFQSIHFI TYEFLQEQVN60
PHRTYNPQSH IISGGLAGAL AAAARGPLDV LR 92

(2) INFORMATION ON SEQ ID NO. 648:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 280 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 648:

AVGSAALFKD GGGGTSAAEA GAAGQRLRSV NCLAYDEAIM AQQDRIQQEI AVQNPLVSR 60
LELSVLYKEY AEDDNIYQOK IKDLHKKYSY IRKTRPDGNC FYRAFGFSL EALLDDSKEL120
QRFKAWSAKS KEDLVSQGF EFTIEDFHNT FMDLIEQVEK QTSVADLLAS FNDQSTSDYL180
VVYLRLLTSG YLQRESKFFE HFIEGGRTVK EFCQQEVEPM CKESDHIHII ALAQALS VSI240
QVEYMDRGE GGTNPHIFPE GSEPKVYLLY RPHYDILYK 280

(2) INFORMATION ON SEQ ID NO. 649:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 244 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 649:

```
DHLQPQKNLC TCLAPGRGGQ QGSSGLEPAL FVEDIVVSRP VEKVDLGLGA LREDVRIGGA 60
ALAAVHVLHL DGHAELGQR NDVDVVALLA HGLHLLLAEL LDSPSTLDEV LEELALALQV120
ARGEQPQVDH KVVGGALVIE GGQQVGDRGL LLHLLNQVHE RVVEILNCEF SEALGHQVFL180
ALGRHSLEPL QLLAVIQQCL QVGESESPIE TVAVRPGLAD VRVLFVEVLD LLLIDVVIFS240
ILLV                                         244
```

(2) INFORMATION ON SEQ ID NO. 650:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 424 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 650:

```
LTTTCVSSSA PSKTS LIMNP HASTNGQLSV HTPKRESLSH EEHPHSHPLY GHGVCKWPGC 60
EAVCEDFQSF LKHLNSEHAL DDRSTAQCRV QMQVVQLEL QLAKDKERLQ AMMTHLHVKS120
TEPKAAPQPL NLVSSVTLSK SASEASPQSL PHTPTTPTAP LTPVTQGGSV ITTSMHTVG180
PIRRRYSOKY NVPISADIA QNQEFYKNAE VRPPFTYASL IRQAILESPE KQLTLNEIYN240
WFTRMFAYFR RNAATWKNAV RHNLSLHKCF VRVENVKGAV WTVDEVEFQK RRPQKISGNP300
SLIKNMQSSH AYCTPLNAAL QASMAENSIP LYTTASMGNP TLGNLASAIR EELNGAMEHT360
NSNESDSSPG RSPMQAVHPV HVKEEPOPE EAEGPLSLVT TANHSPDFDH DROYEDEPVN420
EDME                                         424
```

(2) INFORMATION ON SEQ ID NO. 651:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 117 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 651:

STNAGCTAVR ATACKRQRAP ASHDDPPACE VYRTQSRPSA LESGIKCHSL QVRIGGFSTE 60
 LTSYSNDPNR PPDSRHRPL CHNHQHAHG GTHPQAVLRQ IQRAHEVSRY CAEPRI 117

(2) INFORMATION ON SEQ ID NO. 652:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 426 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 652:

PEAGLFSCSE QSDFPEHIFI MIHTNLKKKF SCCVLVLLF AVICVWKEKK KGSYYDSFKL 60

QTKEFQVLKS LGKLAGSDS QSVSSSSTQD PHRGRQTLGS LRGLAKAKPE ASFQVWNKDS120
 SSKNLIPRLQ KIWKNYLSMN KYKVSYPGPG PGIKFSAEAL RCHLRDHVNV SMVEVTDFPF180
 NTSEWEGYLP KESIRTKAGP WGRCAVVSSA GSKSSQLGR EIDDHDAVLR FNGAPTANFQ240
 QDVGTKTTIR LMNSQLVTTE KRFLKDSLYN EGILIVWDPS VYHSDIPKWY QNPDYNFFNN300
 YKTYRKLHPN QPFYILKPQM PWELWDILQE ISPEEIQPNP PSSGMLGIII MMTLCDQVDI360
 YESLPSKRKT DVCYYYQKFF DSACTMGAYH PLYEKNLVK HLNQGTDEDI YLLGKATLPG420
 FRTIHC 426

(2) INFORMATION ON SEQ ID NO. 653:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 139 amino acids
 (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 653:

RCVQGSHEVL SRKTSLLIAN PPGAAGPSGP QELALLSMGG KVIWVCRPRP IFLRMKTHL 60
CWFMVTCAAG FGDAEVCRSI SGGDAVLFP SLWCWLCGLC GTFCPLARCT LGRGGCGCSA120
RSVAAARSAP TPVGIGSLC 139

(2) INFORMATION ON SEQ ID NO. 654:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 243 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 654:

WRQLARGWGA LSRASCPALP RLANNTVRMA KGDPKKPKGK MSAYAFFVQT CREEHKKKNP 60
EVPVNFAEFS KKCSEWRKTM SGKEKSKFDE MAKADKVRYD REMKDYGPAK GGKKKKDPNA120
PKRPPSGFFL FCSEFRPKIK STNPGISIGD VAKKLGEMWN NLNDSEKQPY ITKTAKLKEK180
YEKDVADYKS KGKFDGAKGP AKVARKKVEE EDEEDGGGGG GGGGGTYSRV GWWSSPKEGE240
RRN 243

(2) INFORMATION ON SEQ ID NO. 655:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 110 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 655:

TEQEESSRRWP FGSIRILLLL ASLSWSIILH FPIIAHFICL CHFIKFRFLF PGHRLPPLRA 60
LLGKFRKIDR DLWVFLMFF SACLHKEGIS GHLALWFLGV TFSHPDCIVR 110

(2) INFORMATION ON SEQ ID NO. 656:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 356 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 656:

VGCSHAAQLH SAPELQTTRO ELSHALYQHD AACRVIALRT KEVTAAREAL ATCLKPQAGLI 60
VPQAVPSSQP SVVGAGEPMD LGELVGMTPE IIQKLQDKAT VLTTERKKRG KTVPEELVKP120
EELSKYRQVA SHVGLHSASI PGILALDLCF SDTNKILTGG ADKNVVVFDK SSEQILATLK180
GHTKKVTSVV FHPSQDLVFS ASPDATIRIW SVPNASCQV VRAHESAVTG LSLHATGDYL240
LSSSDQYWA FSDIQTGRVL TKVTDETS GC SLTCAQFHPD GLIFGTGTMD SQIKIWDLKE300
RTNVANFPGH SGPITSIAFS ENGYLATAA DDSSVKLWDL RKLRTLRLCS WITTLR 356

(2) INFORMATION ON SEQ ID NO. 657:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 240 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 657:

LAQIPELDRG VISRCSQVVT ILREGDASDG ARVAREVGHI STFLQVPDLD LRVHGSCSKD 60
 ESVRVELCTG ERAAGGLICH LGEHTPCLDV RESPVLIIGG AQEIVASGMK AEACHSTLMG120
 PNHLYTRGIG DRPNPDSGIG GSRKHQVLGR VKHHAGDLLG MAFEGSQDLF RTFVKHNDIF180
 IRPTSEDLVG VGRAEVQGGD PRNAGTVQPH VGCHLPVFAE LFWLHQLLRH SLPSLLALRG240

(2) INFORMATION ON SEQ ID NO. 658:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 162 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 658:

EHNSKSSFIN IKRAYLAKDT QIKESLWLRT QGREVPGLCP CWARRRLGTK WEKCWEGLSG 60
 RGHKSSGGQH CRQVMGGTHG DLAANSCCGG VSLVLPGGP LLGSRGPTK GHRTGSPGWL120
 VOLGMMKAREK RVLCSGRIGP DAAEALPVT CGRSALSPLG TL 162

(2) INFORMATION ON SEQ ID NO. 659:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 148 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 659:

RLWTA FHGLR AGDEATRRPG LPEHLHGPAV SHRGDQORDP AYLCWQQRH GAPEERYHPC 60
 PGPSQRPVGR DRAERPHVTG SASASASGPI RPLQSTRFSL AFIP SCTNHP GLPVLCPLVG120
 PLQEPRSGPP GGSTKDTPPQ QELAARSP 148